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WRS-94-2  
June 1994

INTERNATIONAL AGRICULTURE AND TRADE REPORTS

# WESTERN HEMISPHERE

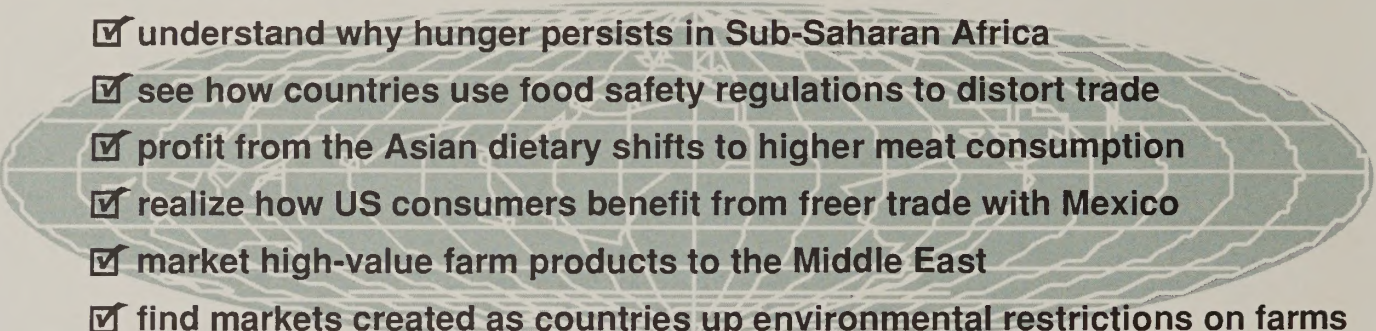
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## INTERNATIONAL AGRICULTURE AND TRADE REPORTS

# WESTERN HEMISPHERE

## Situation and Outlook Series

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## Summary

Most Western Hemisphere countries have substantially changed their agriculture and trade policies since the mid-1980's and these changes are contributing to sustained economic growth. But, even with the reformulated policies, government intervention continues to be substantial in some Western Hemisphere countries. Nevertheless, changing trade policies are redefining world markets and creating regional trade blocs that are shifting trade patterns. The Western Hemisphere, encompassing the United States, Canada, and Latin America and the Caribbean, is one of the largest regional markets, with a combined Gross Domestic Product of \$7.2 trillion, representing 31 percent of global wealth, and 740 million consumers (14 percent of the world's population).

A significant change occurred in Mexico in October 1993 when the country implemented its Programa de Apoyos Directos al Campo (PROCAMPO), a program to decouple Mexican agricultural support by making direct government payments to farmers on a per-hectare basis. PROCAMPO replaces the traditional price-support system that was based on high guaranteed prices and agreed minimum prices (which generally exceeded the world market price). PROCAMPO matches the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT) goals of domestic support measures that have minimal or no trade-distorting effects.

Both NAFTA and PROCAMPO will alter the structure of Mexican agriculture by providing incentives for production of high-valued farm products and by lowering domestic prices of other crops. Further trade liberalization under NAFTA will promote more rapid economic growth. The economic expansion is expected to increase demand for food and agricultural products and imports.

The Canadian Government faces a record deficit in 1994 as it attempt to address Canada's high unemployment. Farm income in 1994 is forecast to remain similar to 1993, as higher livestock returns offset reduced government transfers. Under NAFTA, U.S. Canada trade continues to expand.

For 1994, Canadian canola, soybean, and durum wheat acreages are anticipated to rise at the expense of spring wheat and barley area. And, with little rise in feed costs, profitability in the livestock sector should result in continued expansion of cattle and hog production in 1994.

The Argentine Government has made notable achievements in expanding the economy and controlling inflation through economic reform. A strategy to create a market-oriented economy, where domestic firms are competitive with producers in the international market, has replaced the import substitution strategy that was employed for nearly 50 years. But, despite the elimination of significant disincentives to agricultural production, the agricultural sector does not appear to be a strong participant in the expanding Argentine economy.

In Brazil, the Collor economic reform program has reversed 20 years of trade and industrial policies based on import substitution and market protection. The trade policy portions of the Collor Plan have increasingly integrated Brazil's agriculture into the world market; however, budgetary constraints have hindered farm policy formulation. Thus, the ability of the government to fully and consistently carry out farm programs has been restricted, which has sent mixed signals to Brazil's agricultural sector.

In the United States, the Omnibus Budget Reconciliation Act of 1993 provided tax increases and spending realignments and cuts that reflected changing priorities. NAFTA, which went into effect January 1, 1994, and the agreement reached in the Uruguay Round of the GATT, are expected to open markets, boost American exports, and reduce the trade deficit. Over the longer run, lower trade barriers will increase trade in those commodities for which individual countries have a comparative advantage.

Regionalization of health-related trade restrictions will likely preserve existing U.S. trade flows, and can soften the impact of trade disruptions when an agricultural disease occurs in a limited region of the United States. Drawbacks to regionalization center mainly around new competition, domestically and in export markets, from countries that were previously prohibited from exporting certain commodities due to the presence of disease. Regionalization could be a positive opportunity for Argentina and other livestock-exporting countries of South America because U.S. import markets may open up. Importers of U.S. livestock products also benefit from market preservation in the event of a livestock disease outbreak in the United States.

Increasing concern over environmental quality and food safety is reflected in the sanitary and phytosanitary and environmental provisions of GATT and NAFTA. However, potential for disputes remains rooted in conflicts between GATT and environmental laws and



treaties of individual countries, as demonstrated by the U.S. production and import ban on methyl bromide, an important agricultural fumigant. The U.S. ban is of particular significance for fruit and vegetable trade in the Western Hemisphere.

The Caribbean Basin Initiative (CBI) stimulated investment, production, and export of nontraditional Caribbean and Central American agricultural products to the United States between 1983 and 1993. The large growth of CBI countries' exports to the United States results from the strong performance of a few products, such as melons and pineapples. NAFTA's impact on

these agricultural exports will be limited and is probably unmeasurable, at least through 1995. Three to 5 percent of the growth in CBI countries' agricultural exports to the United States may be vulnerable to increasing competition from Mexico, as tariffs decline under NAFTA.

U.S. sugar policy restricts access to the U.S. market and supports prices much higher than the world price. Neither NAFTA nor GATT will significantly affect U.S. sugar policy or market access.

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Approved by the World Agricultural Outlook Board. Summary released June 15, 1994. The *Western Hemisphere International Agriculture and Trade Report* is one of six regional reports in the 1994 Situation

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## United States

***Economic policy changes in the United States are leading to sustained growth in the U.S. economy. The Omnibus Budget Reconciliation Act of 1993 provided a combination of tax increases and spending realignments and cuts that reflected changing priorities. The North America Free Trade Agreement, which went into effect January 1, 1994, and the agreement reached in the Uruguay Round of the General Agreement on Tariffs and Trade are expected to open markets, boost American exports, and reduce the trade deficit. However, the biggest impact on agriculture in 1993 and 1994 was caused by Mother Nature. [Robert C. Green]***

Drought in the Southeast and the heavy rains and floods in the Mississippi River basin resulted in a 1993 corn crop that was 3.1 billion bushels less than the year earlier. The soybean crop was down 379 million bushels from the previous year. Corn ending stocks for 1993/94 are expected to be the lowest since 1975/76, and soybean ending stocks are expected to be the lowest since 1977/78.

Grain and soybean prices have generally increased in response to the smaller crops in 1993. Livestock producers now face much higher feed costs. Feed supplies are tight and the weather has resulted in lower grain quality and, in some areas, poor quality hay. Fortunately, record feed grain yields in 1992 and relatively large carryover into 1993/94 provided some cushion for the livestock sector. Livestock producers adjusted to tight grain supplies with little inventory adjustment. Producers delayed placing animals into feedlots. Feedlot placements this spring and summer will likely drop below a year earlier. Favorable grazing conditions in most areas and recent timely rains will keep larger numbers of stocker-feeder cattle on pasture until fall. However, good 1994 corn and soybean crops are necessary if the industry is going to avoid making painful adjustments.

The projected agricultural trade surplus for 1994 is \$17.5 billion (figure 1.1). The agricultural trade surplus for 1993 was \$18.0 billion, unchanged from 1992. Exports were valued at \$42.5 billion, marginally above 1992.

Agricultural imports increased almost 1 percent to \$24.5 billion. Agricultural exports in 1994 are forecast at \$42.5, unchanged from 1993, while, imports are forecast at \$25 billion.

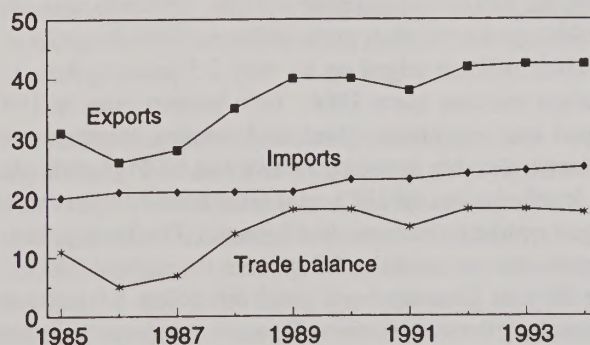
On December 8, 1993, President Clinton signed the North American Free Trade Agreement (NAFTA) implementing legislation into law. NAFTA, which took effect

January 1, removes tariffs and other trade barriers among the United States, Mexico, and Canada over a 15-year period. Canada and Mexico are the second and third largest single country markets for U.S. agricultural exports (the largest being Japan). Although Canada is a relatively mature market, further export growth is expected. Mexico is forecast to import \$10 billion annually in U.S. agricultural products when the agreement is fully implemented.

The U.S. and other Western Hemisphere countries are investigating other free trade agreements in the Hemisphere, either as a part of NAFTA or as a separate bilateral accords. Chile is the first prospect.

After 7 years of negotiations and two postponements, the Uruguay Round of multilateral trade negotiations, held under the General Agreement on Tariffs and Trade (GATT), was concluded December 15, 1993. The United States and more than 100 other countries signed the agreement to slash tariff and non-tariff barriers to world trade in goods and services and to establish a new World Trade Organization (WTO) to replace the GATT next year. President Clinton, Vice President Gore, and U.S. Trade Representative Mickey Kantor have pledged to

Figure 1.1  
**U.S. Agricultural Trade**  
Billion dollars



Source: FATUS, ERS



work to obtain congressional approval of the agreement this year--in time for the WTO's planned start-up on January 1, 1995. As of June 1994, the administration is drafting the implementing legislation which President Clinton will submit soon, subject to fast-track authority. Congress will have 90 legislative days to approve or reject the agreement after implementing legislation has been submitted.

## Economic Indicators Point to Sustained Growth in the Economy

At the beginning of the year, most private forecasters expected long-term interest rates to remain relatively low for the next several years--which would help keep economic growth on track. However, by April 19, the Federal Reserve raised short-term interest rates another 1/2 percentage point, the third such increase since the beginning of February. Major bank prime interest rates rose to 6.75 percent. By boosting short-term interest rates, the Federal Reserve will slow the growth of the U.S. economy in the coming months by raising the cost of borrowing. How much the economy is slowed depends largely on the reaction of the bond market, where long-term rates are set.

The yields on 30-year Treasury bonds jumped to 7.42 percent, the highest since January of last year. Private forecasters believe that long-term rates have increased more than can be justified by the strength of the economy. The Federal Reserve raised short-term rates to quell inflationary expectations, which had been driving up long-term interest rates since September. If the Federal Reserve is successful at allaying the fears of inflation, long term rates should fall from current levels. By the end of the year, short-term rates are expected to be higher than in January.

Low interest rates may allow the economy to continue to grow in the face of future deficit reductions. Expected economic growth in the 3 percent range for 4 years could create about 7 to 8 million new jobs and gradually reduce the unemployment rate.

Real gross domestic product (GDP) rose by 3.0 percent in 1993, the largest increase since 1989. Inflation was low in 1993, as the implicit price deflator (IPD) for gross domestic product edged up by only 2.5 percent, the smallest increase since 1986. Low interest rates in 1993 helped spur equipment, plant, and housing investment and consumer durable spending, which led GDP growth. In the fourth quarter of 1993, real GDP rose 7.0 percent, the largest quarterly increase in 10 years. The bank prime interest rate remained at 6.0 percent throughout 1993. The 30-year Treasury bond yield fell below 6.0 percent in September, the lowest since Treasury bonds were issued.

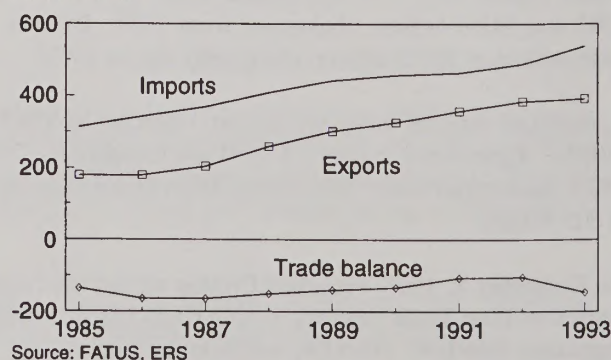
Weak economic performance in the rest of the industrialized world, over the past few years, has taken a toll on the U.S. economy by slowing export growth. The period 1991-93 is the worst economic performance in foreign industrial countries since 1960. Because of this global weakness, U.S. merchandise exports increased about 7 percent in nominal terms in 1991, 5 percent in 1992, and 2 percent in 1993 (figure 1.2). The U.S. merchandise trade deficit for 1993 increased by 37 percent to \$115.8 billion. Exports rose only 3.7 percent for the year, but imports, fueled by the U.S. recovery, jumped 9 percent. The deficit with Japan grew 19.6 percent to \$59.3 billion. The second largest deficit was with China, which widened by 24.4 percent to \$22.7 billion. The deficit with Canada widened 33.7 percent to \$10.74 billion.

## Policy

Public Law 103-66, the Omnibus Budget Reconciliation Act of 1993, was signed into law August 10, 1993. The act is expected to reduce the Federal budget deficit by approximately \$500 billion from 1994 to 1998 through a combination of tax increases and reductions in the growth of Federal expenditures. The act also provides for budget savings to be achieved through changes in commodity programs, effective for 1994 through 1997 crops. The 0/92 provisions for wheat and feed grains and the 50/92 provisions for upland cotton and rice were changed to 0/85 and 50/85 provisions, respectively. Producers who want to participate in the revised program will have to idle at least 15 percent of their maximum payment acres to be eligible for guaranteed deficiency payments on 85 percent of the maximum payment acres.

The Act provided exceptions to 0/85 and 50/85 provisions, where producers who meet certain criteria may receive payments as though 0/92 and 50/92 provisions continue to be in effect. The exemptions that allow 0/92 and 50/92 provisions are: planting minor oilseeds, sesame, crambe, and "industrial and other

Figure 1.2  
**U.S. Nonagricultural Trade Balance**  
Billion dollars





crops;" being prevented from planting; and having reduced yields on failed acres because of a natural disaster. The act reduced the levels of price support offered under the oilseeds, honey, and wool and mohair programs. There was also a reduction in funding for the market promotion program.

The Omnibus Budget Reconciliation Act continues the honey program through crop year 1998, specifying loan rates and program funding for each year. Public Law 103-111, Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 1994, enacted October 14, 1993, provides that, effectively, 1994-crop honey loans repaid during fiscal year 1994 must be for the principal amount of the loan plus interest. In addition, producers of 1994 crop honey may not forfeit to the Commodity Credit Corporation honey pledged as collateral for 1994 price support loans in fiscal year 1994. However, authority for the continuation of the honey support program through 1998 remains.

The Budget Reconciliation Act continued the wool and mohair program through marketing year 1997, reducing the payment limitation amount by \$25,000 each year. However, Public Law 103-130, enacted November 1, 1993, provides for a phase-out of the wool and mohair programs over the 1994 and 1995 marketing years and repeals the National Wool Act of 1954, as amended, effective December 31, 1995. For the 1994 marketing year, producers will receive 75 percent of their calculated payment and for the 1995 marketing year, 50 percent.

The Emergency Wetlands Reserve Program is a voluntary program offering agricultural landowners a chance to restore and protect wetlands on their property through permanent easements. The Budget Reconciliation Act requires the Secretary to enroll not less than 30,000 acres into the reserve by the end of 1995. However, the Appropriations Act allows for enrollment into the reserve not to exceed 75,000 acres in fiscal year 1994. From November 29 through December 30, 1993, landowners in Illinois, Iowa, Missouri, Nebraska, Minnesota, Kansas, Wisconsin, and South Dakota were given the opportunity to enroll land in the program. The program was available to landowners when the cost of cropland reclamation and/or levee repair exceeded the fair market value of the affected land. The first signup returned about 25,000 acres of midwestern cropland to wetlands. The second signup began last month and continues through December 30. So landowners in these States have a further opportunity to return cropland to wetlands.

## **Price and Income Support and Acreage Reduction Programs**

Target prices for the program crops (wheat, rice, corn, sorghum, barley, oats, and upland cotton) have been held at statutory minimum levels specified by amendments to the Agricultural Act of 1949, as amended by the Food, Agriculture, Conservation, and Trade Act of 1990. Target prices are \$4.00 a bushel for wheat, \$10.71 a hundredweight for rice, \$2.75 a bushel for corn, and \$0.729 a pound for upland cotton.

Since 1986, basic loan rates have been based on a 5-year moving average of market prices, dropping the high and the low. In addition, the basic loan rate in a given year could not be less than 95 percent of the previous year's basic loan rate.

For wheat and feed grains, the Secretary has discretionary authority that allows for further reduction of loan rates, depending on the outlook for ending stocks and competitiveness of U.S. products in world markets. Since 1986, announced loan rates for wheat and feed grains have been lower than the basic loan rates. The 1994 wheat and corn loan rates are \$2.58 and \$1.89 per bushel, 13 and 17 cents, above the 1993 levels (appendix table 1). Secretary Espy stated that an increase in the loan rates will mean more money in the pockets of agricultural producers. It also demonstrates the commitment of this administration to increase farm income which, in turn, will have a positive economic effect on rural areas. However, currently projected grain prices are above the announced loan rates.

The Agricultural Act of 1949, as amended in 1985, gave the Secretary discretionary authority to implement market loan provisions for wheat and feed grains since 1986. However, when the Uruguay Round of multilateral trade negotiations was not completed by June 2, 1992; the "GATT trigger" provision of the Omnibus Budget Reconciliation Act of 1990 mandated marketing loan provisions for 1993 through 1995 crops of wheat and feed grains. With marketing loan provisions, producers (under certain conditions) may either: (1) Repay a 9-month nonrecourse price support loan at less than the loan rate plus accrued interest and other charges or (2) receive a loan deficiency payment in lieu of obtaining a loan.

Marketing loan provisions are mandated by the Agricultural Act of 1949 for 1986-95 crops of rice and cotton and 1991-1995 crops of soybeans and minor oilseeds. Rice and cotton loan rates are at formula-determined levels and may be repaid at any time during the term of the loan. Under the marketing loan program, the loan repayment rate may be as low as 70 percent of the loan rate, depending upon the world price (determined



weekly). The loan rate for rice has been held at \$6.50 a hundred-weight since 1990 (appendix table 1). The announced loan rate for upland cotton is 50 cents a pound, down 2.35 cents from a year ago.

Acreage reduction requirements, under the terms of the acreage reduction program (ARP), are set within the statutory guidelines that are based on the relationship of ending stocks to use. The Secretary has a certain amount of discretion in setting the ARP, to ensure that sufficient supplies are available for domestic and export markets. A zero ARP will be in effect for wheat, rice, corn, sorghum, barley, and oats in 1994. This is the first time there have been simultaneous zero ARP's for wheat and feed grain crops since 1982. The announced ARP for upland cotton is 11 percent.

### Triple Base Provision

Since 1991, the maximum payment acres for wheat, rice, corn, sorghum, barley, oats, and upland cotton has been 85 percent of the established crop base acreage, less the acreage required to be devoted to approved conserving uses under an ARP. The 15 percent nonpayment acres are known as normal flex acres.

Producers may plant certain other crops on up to 25 percent of any participating acreage base. This acreage is known as flex acreage, and other crops can be credited as planted to the original program crop. The first 15 percent of the flex acreage is "normal flex acreage" and the other 10 percent is "optional flex acreage." Normal flex acres are not eligible for deficiency payments whether they are planted to the original program crop, planted to another crop, or idled. On the other hand, optional flex acres planted to the original program crop are eligible for deficiency payments. Optional flexed acres planted to another crop or idled are not eligible for deficiency payments. However, other program crops or oilseeds planted on optional flex acreage are eligible for price support loans.

Although the triple base provision allows oilseeds and other nonprogram crops to be planted on a portion of program base acres without penalty or loss of program base acreage, it has not increased acreage planted to these crops. Producers planted 4.0 million acres of flex acreage to soybeans in 1991, 4.6 million acres to soybeans in 1992, and 4.7 million in 1993. However, fewer acres were planted to soybeans each year from 1991 through 1993 than from 1982 through 1986. Producers, responding to ARP provisions and market signals, will decide how many acres to devote to each crop. The March Planting Intentions report indicated that corn plantings may be up 7 percent, soybean plantings may be up 3 percent, while wheat plantings may be down 1 percent (figure 1.3).

## Corn

Current estimates place 1994 corn plantings at 78.6 million acres, up about 5.3 million acres from the previous year. With normal yields, corn for 1994 grain production is projected at 8.7 billion bushels, up 38 percent. Because of expected strong gains in domestic use and larger exports, 1994/95 ending stocks are projected to remain relatively low at 1.26 billion bushels (figure 1.4). Corn farm prices in 1994/95 are projected to average between \$2.10 and \$2.50.

Corn for 1993 grain production was 6.3 billion bushels, 33 percent below the 1992 crop. Exports of corn in crop year 1993/94 are projected to be 1,225 million bushels, down 438 million bushels, and feed and residual use are projected to be 4,825 million bushels, down 476 million bushels. However, even with this reduced use, the sharply lower crop means total ending stocks are projected to drop to 832 million bushels, from 2,113 million a year ago. Corn farm prices in 1993/94 are expected to average between \$2.50 and \$2.60 a bushel, an increase from the previous year's \$2.07 a bushel average.

Figure 1.3  
**Planted Acres of Food and Feed Grains, and Soybeans**  
Million acres

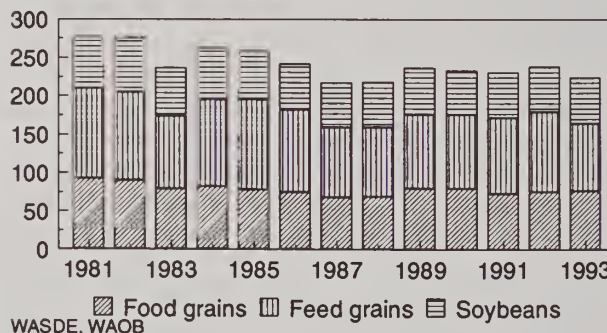
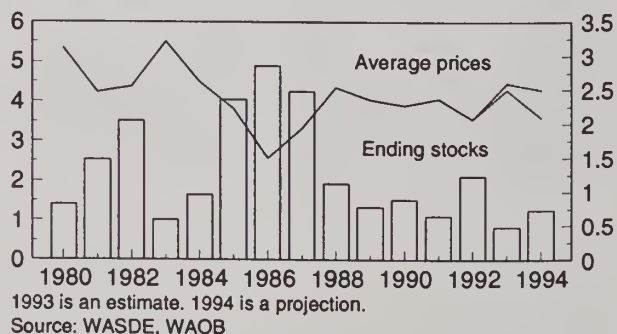


Figure 1.4  
**Corn Ending Stocks and Season Average Price**  
Billion bushels      Dollars





## Wheat

Wheat plantings in 1994 are expected to be 71.5 billion acres, 0.7 billion acres below plantings a year earlier. The survey-based forecast of winter wheat production is down 5 percent. Assuming a return to normal yields, a larger spring wheat crop is projected. Total wheat production is projected at 2,375 million bushels, 1 percent below 1993/94. Because of the expected smaller feed and residual use and reduced exports, 1994/95 ending stocks are projected to be 607 million bushels, up 58 million bushels from a year earlier (figure 1.5). Wheat farm prices are projected to average between \$2.75 and \$3.35.

All wheat production for 1993 was estimated at 2.4 billion bushels, down 2 percent from 1992. Imports are forecast at 100 million bushels, up nearly 43 percent. This is largely because of increased wheat imports from Canada. The U.S.-Canadian free trade agreement allows wheat to freely flow from Canada to the U.S. However, U.S. wheat moving into Canadian markets must have an end user certificate. This is a major trade issue as far as wheat producers are concerned. While imports only comprise 3 percent of total wheat supplies in 1993/94, they are expected to be about 20 percent of durum supplies.

Food use of wheat for crop year 1993/94 is forecast to be 860 million bushels, up 25 million bushels from a year earlier. Feed and residual use is forecast to increase 115 million bushels to 300 million but exports are forecast to decline 129 million bushels to 1,225 million.

Ending stocks of wheat are forecast to be 549 million bushels, up 20 million from a year ago. All wheat farm prices are expected to average \$3.20 a bushel, little changed from the previous year's \$3.24 average.

Figure 1.5

### Wheat Season Average Prices and Ending Stocks

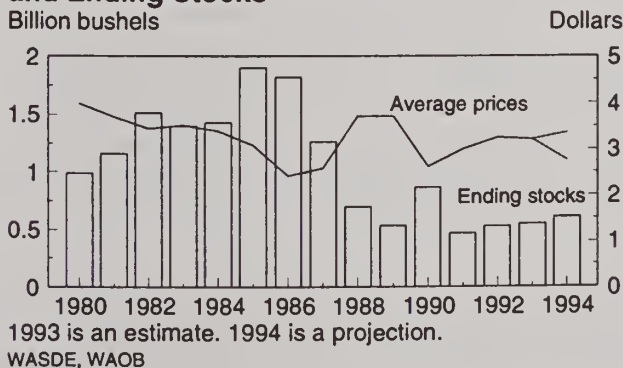
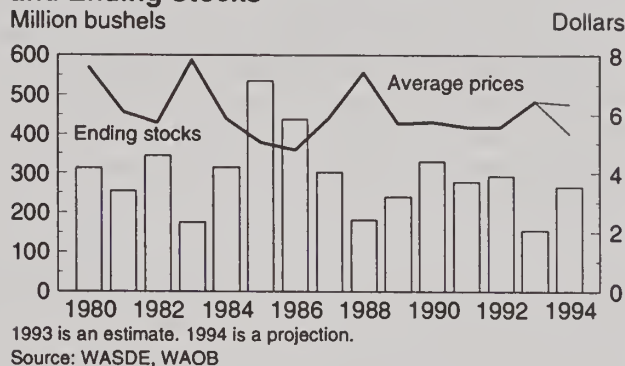


Figure 1.6

### Soybeans Season Average Prices and Ending Stocks



## Soybeans

Soybean planted acres in 1994, estimated at 61.1 million acres, are expected to be about 1.8 million acres above the previous year. With normal yields, soybean production is projected to rebound to 2.1 billion bushels in 1994/95, up 16 percent from the previous crop. Soybean ending stocks are likely to return to a more normal operating level of 265 million bushels as total use expands much more slowly than supplies (figure 1.6). Continued increases in domestic soybean meal use will support a rise in 1994/95 soybean crush to 1,285 million bushels. Soybean and soybean meal exports are projected to show a small rise from 1993/94, while soybean oil exports are projected to slightly decline. Prospects for a small rise in exports of soybeans and soybean meal are based on continued slow growth in foreign protein demand and a likely increase in foreign oilseed production. Soybean prices for 1994/95 are projected to average between \$5.35 and \$6.45 per bushel; soybean meal prices are projected to average between \$155 and \$190 per short ton; and soybean oil prices are projected to average between 24 and 29 cents per pound.

The flooding along the Mississippi River basin and the drought in the Southeast clobbered the soybean crop. Soybean yields were 32.0 bushels an acre, down 15 percent from a year ago. Soybean acreage harvested fell to 56.4 million acres, the smallest since 1976. Soybean production totaled 1.8 billion bushels in 1993, down 17 percent from 1992, and the smallest crop since 1988. Soybean production and supplies available for the market have been increasing since 1988. On average over the past decade, better than 50 percent of soybean supply is crushed each year. In crop year 1993/94, 1,260 million bushels of soybeans are expected to be crushed, resulting in 13,615 million pounds of soybean oil and 29.8 million short tons of soybean meal. The crushing activity has increased since 1988.



Over the decade, about 80 percent of soybean meal and soybean oil supplies have been consumed by the domestic market. Domestic use of soybean meal and oil have been steadily increasing since 1988. Exports of soybeans and soybean oil have been increasing since 1990 and exports of soybean meal have been increasing since 1988.

Exports of soybean meal are forecast to be 4.8 million thousand short tons, down 23 percent in 1993. Exports of soybean oil are forecast to be 1,075 million pounds, down 24 percent.

The farm price for soybeans in crop year 1993/94 is forecast to average \$6.45 a bushel, higher than previous year's \$5.56 a bushel estimate. The market price for soybean oil is forecast to average 27.75 cents a pound, up from the previous year's 21.40 cents a pound average, while the market price for soybean meal is forecast to average \$192.50 a short ton, little changed from the prior year.

### **Red Meat and Poultry Exports to Grow**

Slow expansion of the beef herd and modest reduction in hogs and pigs herd continues in 1994. Beef production is expected to grow more than 4 percent while pork production is expected to be about the same as in 1993. Broiler production will likely increase nearly 6 percent in 1994. Record meat supplies are forecast.

Fresh and frozen imported beef supplies will be down again in 1994. About 90 percent of the imports come from Australia and New Zealand, who have agreed to Voluntary Restraints Agreements in 1994 as they did in 1993. The agreements are put in place to avoid exceeding the trigger level, 110 percent of the quota calculated under the Meat Import Law. This quota is based on past U.S. production and projections for the coming year.

About three-fourths of 1993's beef and veal imports were covered under the Meat Import Law. The remaining shipments came primarily from Canada, Argentina, and Brazil. Canada is exempt because of the U.S.-Canada Free Trade Agreement. Argentina and Brazil also are exempt because they are hoof-and-mouth disease endemic areas and their meat shipments to the U.S. must be heat treated and in air-tight containers.

Beef exports are expected to rebound in 1994 after dropping 4 percent in 1993. Weak sales to Canada, Mexico, and South Korea more than offset gains to Japan. Mexican beef imports are expected to rise in 1994 because beef import tariffs were removed immediately under the NAFTA agreement. The Mexican government had already eliminated retail price controls on high quality beef and recently eliminated price controls for low quality beef cuts.

In 1994, pork imports are expected to increase nearly 5 percent. Imports from the European Union (EU), primarily Denmark and the Netherlands, increased dramatically in 1993 as overproduction and low EU prices made the United States an attractive market.

U.S. pork exports increased 7 percent in 1993. Although there was a large decline in pork sales to Mexico, exports were boosted by the donation of 24 million pounds of pork to Russia during November and December. Total pork exports in 1994 will likely be about 1 percent below 1993. Although growth will probably continue in the fresh market, the market for frozen pork will remain relatively stagnant due to low beef prices and relatively high stocks of fresh pork.

Record broiler exports of around 2.3 billion pounds are likely in 1994. Reductions in international trade barriers and continued strong demand for relatively low-priced leg parts will be primary factors. The U.S. share of global exports has risen sharply in recent years, to about 38 percent in 1993.

Emerging markets such as FSU, Poland, China, and Iran, in addition to long-standing markets in Hong Kong, Mexico, and Canada, have contributed to export growth. Continued growth is expected this year in most major markets, including the Pacific Rim countries, neighboring countries (particularly Canada), the Middle East, and Egypt. However, exports to the FSU could decline because of financing and foreign exchange problems.

The outlook for exports to Mexico remains uncertain. Passage of NAFTA eliminated import licensing restrictions and replaced them with a tariff rate quota which is estimated at 114 million pounds for chicken in 1994. However, this is less than U.S. exports last year. Mexican poultry imports could be considerably lower in 1994, providing opportunities to export pork to Mexico.

### **Agricultural Trade Balance Steady**

The projected agricultural trade surplus for 1994 is \$17.5 billion. The value of U.S. agricultural exports for fiscal 1994 is forecast to change little from previous years while the value of imports are forecast to increase \$500 million. Lower export volumes for wheat, rice, feed grains, and oilseeds will be partially offset by higher export prices. Cotton exports will rise in volume and value. High-value product sales will continue to rise. Tobacco imports will be down, but U.S. imports of most other products will be the same or slightly higher.

Agricultural trade surplus for 1993 was \$18.0 billion, unchanged from 1992. Exports were valued at \$42.5 billion, little increased from 1992. Vegetable and vegetable product exports rose 15 percent to \$3.2 billion.



Fruit, nuts, and preparations declined slightly to \$3.4 billion. Beef and veal increased modestly to \$2.0 billion, and poultry meat exports increased to \$1 billion. The value of agricultural imports increased less than 1 percent to \$24.5 billion. Noncompetitive imports declined 4 percent to \$5.5 billion, while competitive imports rose 2 percent to \$18.9 billion. Competitive imports comprise 77 percent of total imports.

Asia is the fastest growing economic region in the world and the largest regional market for U.S. agricultural exports. The value of U.S. agricultural exports to Asia in 1993 was \$17.8 billion, 42 percent of U.S. agricultural exports. About 47 percent of those exports were to Japan. U.S. exports to Japan in 1993 were 1 percent greater than a year ago.

The value of U.S. exports to Western Europe in 1993 was \$7.5 billion, down 3 percent from a year ago, while the value of U.S. exports to Eastern Europe was less than \$0.5 billion, up 111 percent. About 28 percent of U.S. agricultural exports in 1993 remained in the Western Hemisphere. The value of U.S. exports to Canada increased 8 percent to \$5.2 billion. This represents 12 percent of total U.S. agricultural exports. The value of exports to Latin America increased 7 percent to \$6.9 billion. Exports to Mexico, at \$3.7 billion, were slightly below a year ago.

## **Strength in Farm Income**

The Midwest floods and the Southeast and Mid-Atlantic drought affected the distribution of 1993 incomes for farmers and ranchers. While producers directly affected by the disasters likely saw lower net incomes in 1993, those outside the disaster areas benefited from higher crop prices. Also, the disaster legislation passed by Congress in 1993 partially offsets the financial effects on farmers of flooding and drought. Disaster payments for 1993-crop losses are expected to total nearly \$1.5 billion. Government payments are up nearly 38 percent in 1993. The heavy rains, floods and drought significantly affected 1993 inventories, which have been reduced by \$4.1 billion. For 1993, net farm income is forecast at \$45.5 billion, down nearly 6 percent from 1992.

While 1993 adjustments to inventories were negative, a return to normal yields would result in positive inventory adjustments for 1994, which could add \$3-\$8 billion to total farm income. If this occurs, net farm income could range from \$45 to \$55 billion in 1994, exceeding 1992's \$48.6 billion.



## Brazil

***In 1990, Brazil initiated a broad economic reform program, known as the Collor Plan. This reform package reversed 20 years of trade and industrial policies based on import substitution and market protection. Although the trade policy portions of the Collor Plan have increasingly integrated Brazil's agriculture into the world market, budgetary constraints have hindered farm policy formulation and the ability of the government to fully and consistently carry out farm programs. Thus, even with the trade liberalization occurring in Brazil, the current macroeconomic problems affect agriculture policies, programs, and production and food consumption trends; factors that make predicting Brazil's future trade patterns in agricultural commodities challenging. [Miriam Stuart]***

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### **Economic Troubles in 1990 Spur Major Brazilian Reforms**

Brazil's economy grew steadily from World War II through 1980 and inflation remained low by Brazilian standards, staying under 50 percent most years. However, this growth relied increasingly on external savings, and the oil-price spikes and high interest rates of the early 1980's triggered an era of economic turmoil for Brazil. Chronic current-account deficits were financed mainly through foreign borrowing, and external debt as a percent of GDP grew rapidly through the early 1980's. Imports shrank as trade barriers and foreign exchange controls proliferated in the Brazilian economy in an attempt to finance this growing debt. Meanwhile, GDP shrank more than 7 percent during the 1980-83 period, the first decline in Brazil's recorded history, and inflation began to climb, reaching 230 percent by 1985.

Through 1986 to 1989, a series of economic programs were implemented to reduce inflation and reinvigorate Brazil's ailing economy; yet none of the programs brought long-lasting success. By 1990, inflation had reached almost 3,000 percent while GDP contracted by 4 percent.

Fernando Collor was elected to office in the midst of this economic crisis, in the first direct presidential election in nearly three decades. He immediately began to implement a reform package with two major goals: 1) to stabilize the economy through new monetary, fiscal, exchange rate, and price and wage policies; and 2) improve economic efficiency by exposing most sectors (including agriculture) to increased market competition. Two specific objectives of Brazil's agricultural policy reforms under the Collor Plan were to: 1) improve agricultural efficiency by opening it to the international market; and 2) increase agricultural production and quality to enhance both domestic food supplies and exports, but especially food staples. Underlying Collor's plan was the notion that government resources were limited, and new policies to support the

agricultural sector must be cost-efficient and targeted. President Itamar Franco, Collor's successor in 1992, has altered some Collor policies, but has generally kept the main goals of the 1990 economic reforms for the agriculture sector.

A 3-year incremental tariff-reduction scheme was implemented in 1990 to cut the average (non-oil) tariff from 32 percent to 14.2 percent by the end of 1993, with no single duty exceeding 35 percent. This schedule was accelerated and most of the tariff reductions were actually complete by mid-1993, 6 months ahead of schedule. Non-tariff barriers were reduced, a privatization program initiated, and government intervention in markets reduced. In September 1991 the government decontrolled nearly all prices of consumer products, including food items. One of the most drastic changes in the agriculture sector was the end of government control of wheat marketing for the first time in 25 years. Also, subsidized farm credit programs and producer price support policies were re-vamped to favor production of domestically-consumed basic food and fiber crops, especially corn, rice, manioc, and drybeans, rather than export-bound commodities such as soybeans.

Although trade policy reforms have been successful in opening Brazil markets to the world, meeting some of the producer policy goals set out under the Collor Plan have been more difficult. For example, some components of the official agricultural packages announced at the beginning of the crop year have changed yearly because of budget constraints. Lack of funds has meant some producer programs are insufficiently funded to be effective, and policy announcements have been delayed at times. These frequent policy changes and delays, in turn, have affected annual Brazilian production, imports, and exports, and add uncertainty to the long-term outlook for Brazilian agriculture.

The purpose of this paper is twofold: To describe the changes to Brazil's agricultural policy under the reforms,



and examine the grain and soybean sub-sectors after 1990 to illustrate the differences in the stability of trade versus production policies.

## Significant Shift in Trade Policies in 1990 Reforms

From World War II to 1990, and especially since the mid-1970's, most of Brazil's trade policies favored industrial products over agricultural ones by applying bans, controls, and taxes on agricultural exports. These export constraints served to insure that domestic demand for agricultural goods was met (while dampening food prices) before any surpluses were exported, and were an integral part of Brazil's industrial development policy. Industrial development was also fostered through multiple exchange rates, import barriers, public investment, and export subsidies. Agriculture did receive federal assistance in the form of subsidized credit, minimum guaranteed prices, and other forms of support, but industrial sectors were favored in national policy.

Brazil has grown to become a global agricultural powerhouse in spite of decades of policies that favored industrial sectors. In 1992, Brazil was the world's largest citrus, frozen concentrated orange juice (FCOJ), and coffee producer; the second largest cocoa, soybean, soymeal, and soyoil producer; the third largest sugar, tobacco, and broiler producer; was among top five producers of corn and rice; and among the top 10 beef and veal producers and exporters. The country has been the world's largest soy meal exporter (in volume) since 1980; among the top four soy oil exporters since the mid-1970's; and the world's second largest exporter of whole soybeans, after the United States, since 1991. Brazil is the world's largest exporter of orange juice, exporting more than 10 times that of the U.S., the second largest exporter, in recent years. The country is also the world's largest coffee exporter and a major poultry exporter -- ranking second or third in the world since the late 1970's. In 1993, Brazil was among the world's top 10 exporters of sugar.

The 1990 reform package was designed to gradually allow market forces, rather than government intervention, to allocate economic resources between agriculture and most (but not all) industries. A key feature in this policy shift was the removal of past restrictions on agricultural trade. Almost all non-tariff import barriers and export controls on agricultural products and inputs were eliminated in 1990. Import licenses remained mandatory for grains, but are to be granted automatically and used only to collect trade statistics rather than to control imports as in the case prior to the reforms. Export and import restrictions on soybeans were also eliminated, and licensing remained only for accounting purposes.

The tariff cuts on agricultural commodities under Collor's tariff-reduction scheme are shown in Table 2.1. A

mechanism to temporarily reduce import duties further to control food price inflation was also put into place. Temporary duty increases have been invoked on occasion, either due to political pressures from farmer groups or to prevent alleged dumping of subsidized exports from other countries, but the overall push has been to lower tariffs.

GATT officials have commended Brazil on achievements in reducing trade barriers. According to the 1992 GATT Trade Policy Review of Brazil by the GATT Secretariat, impressive results have been obtained in the area of trade policy reform (page v). Between 1990 and 1992, total agricultural import volume grew by 56 percent, and grain imports grew by 70 percent.

Table 2.1  
Brazil agriculture product tariff reductions 1990-94<sup>1</sup>

Commodity	Ad.valorem tariff	
	1990	1994
	-----percent-----	
Wheat	25	10-17 <sup>2</sup>
Corn	15	10
Rice	20	15
Wheat flour	30	10
Soybeans	10	10
Soybean oil	20,25 <sup>3</sup>	10
Cotton	0	0
Beef, poultry,		
Pork; fresh,		
Chilled, frozen	20 <sup>4</sup>	10
Tobacco	75 <sup>5</sup>	20

<sup>1</sup>This table does not include preferential tariffs granted to MERCOSUR partners or temporary tariff reductions or increases invoked under special programs or policies.

<sup>2</sup>Sliding scale tariff; 10 percent except during domestic harvest season, Sept.-Jan.

<sup>3</sup>20 percent for crude, 25 percent for other.

<sup>4</sup>Beef; others, not available.

<sup>5</sup>All or part of 1990 data not available.

Source: International Union for the Publication of Customs Tariffs and USDA/FAS

## Production Policies Under the 1990 Reforms

Production policy reforms designed to increase food output and their corresponding effects are not as simple to analyze as trade reforms. The 1990-1992 recession in Brazil, severe inflation, and a growing national deficit have made it difficult to come up with the national funds to design and administer effective farm income support programs.



## **Producer Price Support Policies Revamped Under Reforms**

In the 1990 reforms, programs to stabilize the domestic prices of grains, cotton, and a few other basic food items were continued through two mechanisms: a minimum guaranteed price (MGP) program, designed to set floor producer prices through government commodity purchases; and a buffer stock release program to dampen price spikes when temporary shortages occur. Currently, the National Food Supply Company (CONAB) under the authority of the Ministry of Agriculture administers these programs.

The government revamped the stock release program in 1991 to make it more transparent or public by announcing liberation or threshold prices, *Precos de Liberacao de Estoques* (PLE's) that would trigger grain stock sales. If the market price rises above the PLE for a certain number of days, government stocks of rice, corn, drybeans, wheat, beef, manioc, and cotton are sold in wholesale cash markets. The PLE program also facilitates imports when supplies are still insufficient after stock releases, through the temporary reduction of import duties. The liberation prices are based on moving average world reference prices, and are adjusted periodically for inflation.

Although the Collor Plan increased MGP's significantly beginning in the 1990/91 crop year, especially for food staples, the number of products covered under this program dropped from 20 to 10. Crops covered in the MGP program included cotton, irrigated and non-irrigated rice, corn, manioc, drybeans, wheat, and other basic food items. MGP's for rice, corn and soybeans were regionalized in the 1990/91 crop year, to more efficiently allocate scarce credit resources to areas that have lower production and marketing costs. But one year later, these regional support price differences were nearly eliminated in response to pressure from farm groups in low-MGP regions. However, MGP's for corn and rice were regionalized once again in the 1993/94 farm package because of budget concerns. In the 1992/93 package, the soybean MGP program was discontinued altogether.

Although the MGP program requires the government to purchase all of the grain offered for sale by producers, budgetary constraints, especially since 1992, have delayed commodity purchases. As a result, market prices have fallen below the MGP at times, and the program is reported to have lost some of its viability in influencing farmers' decisions.

## **Credit Programs Refocused To Support Food Production**

Subsidized credit became a major agricultural policy instrument in the mid-1960's, but the availability of subsidized credit as a portion of total credit needs has been

declining since the 1980's. Subsidized real interest rates for agriculture were kept negative or extremely low compared to commercial rates from the 1970's through 1989, and were below the real rates of subsidized credit available to other sectors. The Summer Plan of 1989 ended the possibility of negative real interest rates by indexing agricultural loan principals to a factor closely linked to the CPI.

The Collor Plan designed credit programs to provide production, marketing, and investment loans, with most of the funds earmarked for production or *custeio* credit for growers of grains, cotton, and drybeans. Soybean growers remained eligible for government credit, but generally at less favorable terms than for basic food and fiber crops.

Under the *custeio* program, farmers are allowed to borrow a percentage of their production costs at subsidized interest rates, but the rest must be obtained at commercial rates. Because real commercial interest rates are extremely high in Brazil, subsidized credit has been an important form of producer support. The government has announced successively larger (in real terms) annual *custeio* credit packages since the 1991/92 crop year in an effort to expand production of basic food commodities.

To determine the amount of subsidized credit allowed, official cost structure estimates are made for variable costs of various crop/yield combinations, based on farm size, and even region for some commodities. Lending limits, or the percentage of these estimated variable costs that can be borrowed at subsidized rates, are announced at the beginning of each crop year. Producers with small farms have traditionally been permitted to borrow a larger share of their variable costs, and more recently (since 1991), at lower rates than their counterparts with larger farms. However, since the reforms, lending limits for larger corn and rice farms have increased steadily to encourage production of these food staples.

Lending limit terms are adjusted from year to year to guide production based on annual agricultural goals and to control costs of the program. In the 1991/92 credit package, the amount loaned to farmers was linked to use of yield-increasing technology, and in the 1992/93 crop year, farmers of certain crops could borrow up to 100 percent of their costs if they followed agricultural extension guidelines designed to increase yields. In the 1993/94 credit package, only small soybean producers were eligible for subsidized credit, while larger producers had to obtain credit through commercial sources.

Prior to the 1993/94 crop year, credit programs had penalized farmers by adjusting loan principals to actual inflation rates, while adjustments to the MGP (which served as a floor price), often lagged behind inflation. The result of this unequal indexation was a squeeze on producer



**Table 2.2**  
Brazil's subsidized credit program -- percent of variable costs farmers may borrow at subsidized credit rates

Crop and Crop Year	Producer Size <sup>1</sup>		
	Mini/small	Medium	Large
	----- percent -----		
<b>Rice, upland</b>			
1989/90	80	60	40
1990/91	100	80	60
1991/92 <sup>2</sup>	70-100	60-100	50-90
1992/93 <sup>3</sup>	90-100	80-100	80-100
1993/94 <sup>3</sup>	90	80	80
<b>Rice, irrigated</b>			
1989/90	100	60	40
1990/91	100	80	60
1991/92 <sup>2</sup>	60-100	50-100	40-90
1992/93 <sup>3</sup>	90-100	80-100	80-100
1993/94 <sup>3</sup>	90	80	80
<b>Com</b>			
1989/90	80	70	50
1990/91	100	80	60
1991/92 <sup>2</sup>	70-100	60-100	50-100 <sup>4</sup>
1992/93	90	80	80
1993/94	90	80	80
<b>Soybeans</b>			
1989/90	70	40	30
1990/91	70	30-40 <sup>4</sup>	20-30 <sup>4</sup>
1991/92 <sup>2,4</sup>	60-100	40-90	30-70
1992/93 <sup>3</sup>	80-100	60-100	60-100
1993/94 <sup>3</sup>	80	0	0
<b>Drybeans</b>			
1989/90	100	100	100
1990/91	100	100	100
1991/92 <sup>2</sup>	80-100	80-100	70-100
1992/93	90	80	80
1993/94	90	80	80

<sup>1</sup>Producer size based on gross annual income, as defined by GOB.

<sup>2</sup>Depends on region of country farm located.

<sup>3</sup>Farmers could borrow up to 100 percent if they followed agricultural extension guidelines.

<sup>4</sup>Depends on farmer's historical yield.

Source: USDA/FAS

profits and high loan default rates. The 1993/94 credit package for wheat, rice, cotton, drybeans, manioc, and corn (excluded soybeans) included a new provision known as product equivalency, in which planting loan balances and minimum support prices are adjusted with the same inflation index. Product equivalency had been used for small farmers in some areas since its creation in the 1991 first-ever farm bill, the Brazilian Farm Act, but it was not used on widespread basis. Plans to renegotiate past farm

debt in product equivalency terms was also in the 1993/94 farm package.

Budgetary constraints have hindered administration of the subsidized credit program with delays in announcements of credit terms, slow delivery of credit to farmers, and slow inflation adjustment to support prices. Because of uncertainties about farm program stability and high commercial (unsubsidized) rates, larger farmers have increasingly found ways to finance planting such as swap arrangements -- trading a portion of their future output for seeds, fertilizer, and other inputs -- instead of obtaining production loans through traditional channels. Soybean farmers especially have made use of swap arrangements and other alternative funding sources.

### Grain and Oilseed Sectors Have Fared Differently Under Reforms

#### Government Control of Wheat Sector Ended in 1990

The 1990 reforms ended 25 years of government control of the wheat market, in an effort to lower federal outlays. By early 1991, farmers, cooperatives, millers, and traders were able to buy, sell, and trade wheat through non-government channels, and consumer subsidies of wheat products were gradually phased out. The official agencies responsible for purchasing and selling domestic and imported wheat were dissolved, and a national food company was created to administer Brazil's price support policies. Wheat tariffs were reduced under Collor's 4-year tariff-reduction scheme.

The government of Brazil has reduced its support for wheat production since 1990, and wheat acreage has fallen off, as shown in Table 2.3. Low support prices relative to production costs, the privatization of the wheat sector, the slow purchase of commodities to support MGP's, and frequent delays in credit availability have all contributed to the decline in wheat acreage and production since the Collor Plan. Increased competition from imports, due to falling tariffs and reduced trade barriers, has led to a growing dependency on wheat imports. Much of the remaining wheat planted serves primarily as a winter cover for soybean farmers.

Between the 1990/91 and 1993/94 crop years, wheat area harvested fell by 50 percent while imports nearly doubled -- rising from 2.8 million metric tons (mmt) to 5.6 mmt (July-June marketing year). Wheat imports have come primarily from Argentina because of a wheat accord between the two countries, and the preferential wheat tariffs granted to Argentina under the implementation stages of the MERCOSUR agreement(1).



Table 2.3  
Brazil's grain and soybean production, supply and utilization data

Wheat, grain and soybean production, supply and utilization data							
Units	1,000 hectares	tons/ hectare	-----1,000 metric tons-----				
Corn							Std. Imports (Oct-Sept)
Crop Year	Area	Yield	Production	Consumption	Feed Use		
1970/71	10550	1.34	14130	13239	9330		2
1980/81	12810	1.76	22555	22300	18500		1600
1985/86	12710	1.59	20264	22264	19000		1900
1986/87	14610	1.83	26760	26426	22910		1383
1987/88	13375	1.89	25220	24470	21430		133
1988/89	12970	2.03	26270	25108	22000		141
1989/90	12100	1.84	22300	25800	22500		415
1990/91	13490	1.80	24330	25630	22250		912
1991/92	14030	2.20	30800	28670	25670		503
1992/93	12400	2.35	29200	30200	26500		1167
1993/94	13800	2.37	32700	32500	28500		1000
1994/95	13500	2.30	31000	34250	30000		1000
Rice							Std. Imports (Jan-Dec)
Crop Year	Area	Yield	Production	Consumption	Rough Prod		
1970/71	4764	0.77	3668	4546	5394		1
1980/81	6100	0.96	5874	6256	8638		142
1985/86	5585	1.20	6675	6675	9816		1202
1986/87	5980	1.20	7193	7058	10578		85
1987/88	5961	1.35	8024	7100	11800		110
1988/89	5350	1.41	7540	7475	11088		147
1989/90	4180	1.30	5420	7924	7971		493
1990/91	4230	1.61	6800	7400	10000		776
1991/92	4614	1.49	6868	7500	10100		450
1992/93	4384	1.54	6733	7800	9901		600
1993/94	4300	1.71	7350	8000	10206		850
Soybeans							Amount Crushed
Crop Year	Area	Yield	Production	Imports	Exports	Consumption	
1965/66	491	1.21	595	0	121	456	395
1970/71	1716	1.21	2077	1	230	1977	1700
1980/81	8501	1.79	15200	934	1502	14686	13796
1985/86	9450	1.49	14100	337	1192	13377	12332
1986/87	9270	1.87	17300	441	3290	15031	13820
1987/88	10550	1.71	18020	62	3020	15033	13676
1988/89	12150	1.94	23600	63	5080	17557	16189
1989/90	11550	1.76	20340	0	4220	16645	15435
1990/91	9750	1.62	15750	350	1700	14207	13057
1991/92	9700	1.99	19300	430	3826	15971	14721
1992/93	10600	2.10	22300	0	4190	18255	16775
1993/94	11550	2.12	24500	0	5400	18861	17311
Wheat							Std. Imports (July-June)
Crop Year	Area	Yield	Production	Consumption			
1970/71	1895	0.92	1735	3689		1760	
1980/81	3062	0.87	2676	6600		3893	
1985/86	2610	1.65	4300	6800		2500	
1986/87	3820	1.47	5600	8000		2893	
1987/88	3475	1.76	6100	7100		2063	
1988/89	3450	1.68	5800	7800		765	
1989/90	3355	1.65	5550	7400		1518	
1990/91	3280	1.01	3300	7844		2805	
1991/92	2145	1.43	3078	7176		5300	
1992/93	1997	1.37	2739	7839		5814	
1993/94	1600	1.28	2050	8000		5600	
1994/95	1500	1.47	2200	5700		5700	

Source: USDA, FAS & ERS



## **Corn Production Responded to Reforms**

Corn is a food staple in rural areas of Brazil, is an important input for the country's large poultry industry, and is also used in swine production. Farmers have traditionally shifted acreage between corn and soybeans based on production incentives at planting time. Corn is a major crop in Brazil; in 1992/93, corn area exceeded soybean and wheat acreage combined, and accounted for 96 percent of all coarse grain area.

Brazil's recent recession has actually increased the demand for poultry, and therefore feed corn, because the price of poultry has declined relative to beef and other food staples. There is little substitution for corn with other types of feed grains in Brazil's poultry sector because Brazilians have a strong preference for the yellow-colored poultry meat and egg yolks that result from feed rations high in corn.

Extremely high transportation costs for moving grain internally are an important factor in determining corn import needs. Infrastructure bottlenecks in Brazil and the country's great size, often make it less expensive to import grains than to ship from surplus to deficit regions within the country. Between 1985/86 and 1992/93, Brazil imported an average of 800,000 metric tons of corn per year. Because of the preferential corn import duties granted under MERCOSUR terms and its proximity to Brazil's poultry industry, most of these imports were from Argentina. Unlike wheat, corn imports were allowed by the private sector even prior to the 1990 reforms.

One goal of the 1990 reforms was to shift production support to corn, and in the 1990/91 and 1991/92 crop years, corn MGP's and production credit were successively increased. Farmers responded by increasing corn acreage and output significantly these 2 years, at the expense of soybean production. With two good corn crops in a row, stocks were large going into the 1992/93 crop year, and to control costs in stock holding programs, the real corn MGP was lowered. Delayed subsidized credit disbursement during planting and slow government purchases to support corn MGP's in the previous harvest season also discouraged corn production in 1992/93. Although official credit for corn was increased for the 1992/93 crop year, incentives for planting soybeans were strong, and as a result corn acreage and production fell as land shifted into soybean production.

In 1993/94 the corn MGP's were increased 5 percent, but once again regionalized in an effort to boost production and control government spending. Stronger domestic prices and good weather are factors in the expected small increase in corn acreage, yields, and output in the current crop year.

## **Rice Production Also Expands, but More Slowly**

Rice is important in Brazilian diets, especially in the central and southern regions, and is typically served at both mid-

day and evening meals. While consumption of higher quality rice varieties has declined since 1989 because of the recession and the accompanying loss of consumer purchasing power, total per capita consumption has been stable at just under 50 kilograms per year.

Brazil is the Western Hemisphere's largest rice producer, and produces both higher-quality irrigated and lower-quality upland varieties. Rice prices and production are influenced by the government's MGP, PLE, and credit programs, and production of irrigated rice has been especially encouraged through higher MGP's and more generous credit policies, because of the higher productivity of irrigated rice land.

Under the Collor Plan to increase food staple production, rice MGP's and production credit were increased in both 1990/91 and 1991/92 crop years, as did acreage and production. The 1992/93 rice crop was not as large as the previous year's in spite of increased production incentives. The lack of sufficient commodity purchases to support the MGP, farmer debt problems, and poor weather resulted in a 5 percent drop in harvested acreage and a marginal decline in rice production for 1992/93. In 1993/94 regional MGP's were once again implemented in an effort to control government costs, but the MGP is reported to have been set below actual production costs. As a result of these lower support prices, a small decline in acreage is expected in the current crop year, however, yields and production are expected to be higher than in the previous crop year because of improved weather.

As with corn, high freight costs discourage shipping rice within Brazil from surplus to deficit regions. Imports have remained strong since 1990, because of the importance of rice in Brazilian diets and the regular gap between production and consumption. Since 1990 falling tariffs on both MERCOSUR and third country exporters, has also boosted rice imports. The U.S., Argentina, and Uruguay are the major rice suppliers to Brazil, but the MERCOSUR partners can import with no duty (except for broken rice, which is levied a 1.1 percent tariff). Temporary decreases in import duties for third countries have been invoked occasionally under Collor's PLE program to boost imports for adequate supplies at stable prices. Rice imports for the 1993/94 crop year are expected to be the highest since 1985.

## **Soybean Growers Less Dependent on Domestic Programs**

With the shift in government program emphasis towards food crops, support to the soybean sector was reduced in 1990. However, because soybeans are an export crop, this sector has been more insulated from domestic policy than grain crops. Soybean meal is also an important export, but most soybean oil produced in Brazil is consumed domestically, and oil demand drives oilseed crush.

Brazilian processors frequently import small amounts of soybeans to meet domestic demand for oil before the new crop comes in or to re-export as soy meal under the duty drawback scheme. Soybean output is affected indirectly by corn production policies, but also by the decline in support for wheat production since 1990. Falling wheat support has reduced returns to the wheat/soybean combination, and some farmers are experimenting with alternative second crops.

As with other commodities, transportation is a problem for the soybean sector. Brazil's large size, a shortage of trucks, and lack of a functional rail system makes moving soybeans from and inputs to interior regions expensive. In some annual agricultural packages, the government has encouraged soybean production nearer to export points, and prior to the 1990 reforms, plans for upgrading the nation's rail system were discussed. However, with the push to expand food production under the Collor Plan, there has been little official support for funding to improve the soybean transportation system.

Initially under the Collor Plan, the soybean MGP was regionalized to encourage production in areas close to domestic and export markets, but in the 1992/93 crop year, the support price was eliminated altogether. However, there were no direct effects of eliminating the MGP because domestic soybean prices are more closely linked to international rather than domestic market conditions.

In 1990/91 and 1991/92 soybean credit programs were also regionalized to control government costs, and since the 1991/92 crop year, the amount farmers could borrow has also been linked to yields. Lending limits for all farm sizes were successively increased in 1991/92 and 1992/93, but in 1993/94, subsidized credit was eliminated altogether for medium and large producers.

In spite of the subsidized credit programs, soybean farmers have come to rely less on government credit than other producers, and instead obtain private financing, either from cooperatives or processors through swap arrangements, or through international loans. Soybean crushers and exporters are permitted to seek international financing (at much lower rates than available domestically) through forward sales, if their product is destined for the export market. Both of these financing options have become more popular with the decline in official soybean support, and because the indexation of official loan principals has been more rapid than the rise in real soybean prices.

In 1990/91, delays in delivering subsidized credit, poor world demand, low international prices, plus the higher corn MGP's and better credit terms for corn resulted in a 15 percent drop in soybean area, and a 23 percent decline in production. In 1991/92, corn prices were more attractive than soybeans' in some areas, and resulted in a fall in

soybean acreage. However, improved weather and input use buoyed soybean yields, and production increased slightly in 1991/92 in spite of the lower acreage. In 1992/93, lower corn MGP's, stronger soybean prices, and good export opportunities, in tandem with ample private credit, brought more soybean acres into production and output increased significantly.

In 1993/94, only small producers could borrow through official programs, but could obtain up to 80 percent of variable costs, and the total amount of credit available was unchanged from the previous year. Under the Northeast Corridor Export Program initiated in 1991 to encourage development of the northeast region of the country, new land has been brought into soybean production. Under this program, the northeast region's soybean output destined for export in 1993/94 tripled over the 1991/92 figure. Stronger international prices for soybeans in the 1993/94 crop year also shifted acreage out of competing crops and pasture, and this, in combination with good weather and high input use, has resulted in a record soybean crop.

### **Brazil's Future Policy Direction Uncertain**

A common theme in each commodity story is the key role budgetary constraints have played in both agricultural policy formulation and the ability of the Brazilian government to carry these policies out. In short, even with the trade liberalization occurring in Brazil, macroeconomic problems will continue to affect food production and consumption trends until they are resolved. In spite of the rebounding of Brazil's GDP in 1993, national budget concerns have become more pronounced in the first half of 1994. These fiscal concerns add more uncertainty to future agricultural policy formulation and output because Brazil's farm programs require large financial outlays.

Extremely high inflation is Brazil's most contentious macroeconomic problem at present, and the growing domestic deficit is recognized as the cause of this inflation. Increased deficit spending since the late-1980's has been a direct result of the 1988 constitution which obligated the federal government to assume fiscal responsibility for certain programs without including clear provisions for funding these expenditures. The government has resorted to monetary emissions and deficit spending to meet its obligations, and soaring inflation has been the result.

Although economic growth in 1993 was nearly 5 percent, the first strong showing since 1989, Brazil's 1993 annual inflation rate of 2,500 percent was one of the highest in the world. By April 1994, inflation had climbed to an annual rate of almost 4,000 percent. This raging inflation is unlikely to slow without additional structural changes in Brazil's macroeconomic policies that stop or slow deficit spending.



Brazil's leaders are making further economic reforms to address some causes of the chronic inflation; a three-phase economic stabilization plan was adopted in early 1994. The three-phase reform to be implemented during 1994 includes: A significant reduction in deficit spending; broad, automatic indexation of many prices and salaries to a standard index to end the price distortion that occurs with the use of multiple indexes; and introduction of a new currency, the "real" in July 1994, the value of which would be stabilized by a fixed exchange rate and/or strict laws implemented to curtail the use of monetary emission to cover deficit spending. However, as of mid-1994, it would be premature to predict whether this three-phase program will be effective in combating inflation.

A review of the 1988 constitution was also begun in late 1993, with one goal being to change provisions that encourage deficit spending and its inflationary pressure. Unfortunately, constitutional revisions are moving very slowly in the legislature, and are in jeopardy of being delayed until after the national election in October.

Brazil's external debt of over US\$100 billion (short and long-term obligations), and high interest charges also complicate an already difficult macroeconomic situation. Brazil worked out an external-debt rescheduling plan in April 1994 for a portion of its outstanding obligations, which will mitigate some (but not all) debt problems.

Drastic economic reforms may be especially difficult to enact in 1994, as Brazil holds a national election in October. In any country, mention of austerity programs and balancing budgets are politically difficult during election campaigns. Adding more uncertainty to the outlook is that the candidates for president range widely across the political spectrum. No doubt, the winner of the election in October 1994 will have an important influence on economic and agriculture policies. As of June 1994 the two main presidential contenders are: 1) Fernando Henrique Cardoso, a centrist, the finance minister until he announced his presidential campaign, and drafter of the current three-phase program, and 2) Luis Inacio "Lula" da Silva, of the Socialist Workers Party, which has not yet developed a cohesive platform, but has called for among other things, a suspension of payments on foreign debt, and a reversal of the privatization program. An additional source of political uncertainty is the current Congressional bribe-taking scandal that has resulted in the expulsion of several members, with more likely to come.

One final consideration in the discussion of Brazil's long-term food demand and trends in trade is the impact that recent economic problems have had on food consumption. There is evidence that the 1990-92 recession and high inflation have eroded consumers' purchasing power. In response, consumers have cut back on food consumption and/or switched to less expensive foods in an effort to

maintain diets. Aggravating the problem is that Brazil's income distribution pattern -- one of the most skewed in the world -- may have become more pronounced since 1990. To expand food consumption in Brazil, the decline in real incomes and income disparities will have to be addressed in future economic reforms.

#### Footnotes:

1) Brazil, Argentina, Uruguay, and Paraguay formed the Common Market of the South (the acronym is MERCOSUL in Brazilian Portuguese, MERCOSUR in Spanish) in 1991 under the Treaty of Asuncion. Goals of the MERCOSUR trade bloc include free movement of goods, services, capital, and labor between the four countries, plus a common external tariff for third countries by January 1, 1995. As part of the implementation phase of MERCOSUR, Brazil currently has a preferential tariff scheme for these trade partners, and duties will be cut further as the treaty comes into full force.

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## Canada

***The newly elected Liberal government will face a record deficit in 1994 as it attempts to address Canada's high unemployment. Farm income in 1994 is forecast to remain similar to 1993, as higher livestock returns offset reduced government transfers. U.S. - Canada trade continues to expand under the U.S. - Canada Free Trade Agreement, although trade disputes have lingered. Canola, soybean, and durum-wheat acreage is anticipated to rise in 1994 at the expense of lower spring wheat and barley area. Cattle and hog expansion will continue in 1994 with no significant rise in feed costs. [Mark V. Simone]***

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### Macroeconomic Developments

Canada's annual Gross Domestic Product (GDP) growth rate is expected increase to 2.9 percent during 1994, with rising exports and renewed business investment on machinery and equipment driving much of the growth. A stronger U.S. economy and a lower Canadian dollar will also benefit exports. Continued weakness in consumer spending and stagnant wage gains will restrain growth but should allow Canada to maintain the lowest inflation rate (1.5 to 2 percent) of all the industrialized countries. However, the unemployment rate is forecast to remain high, at 11.1 percent. With low inflationary pressures, Canadian interest rates should remain stable. As a result, the Canadian dollar is anticipated to remain below US\$0.80 during 1994.

The October 1993 elections brought the Liberal Party back in control of Parliament and decimated the incumbent Progressive Conservative Party. The Conservatives seats in Parliament shrank to two from a majority of 154 seats, and Jean Chrétien became the new Canadian Prime Minister. The election also saw the rise of two previously lesser known parties, the French secessionist Bloc Québécois and the populist Reform Party. Bloc Québécois goal is a sovereign Quebec while the Reform Party is seeking a larger voice in the federal government for Western Canadian interests. The challenge for the Liberal party is reducing a record federal deficit estimated between \$CAN 44 to 46 billion in fiscal year 1994 while addressing Canada's chronically high employment rate, above 10 percent since 1991. However, with net government debt approaching 90 percent of GDP, Chrétien's proposed job creation programs may be halted through government spending reductions. The Liberals will also be hard-pressed to avoid tax increases, even though Canada already has a 7 percent federal value-added tax on goods and services, in addition to provincial sales taxes.

### Agriculture

As a consequence of fiscal deficits, transfers to Canadian agriculture are expected to continue to decline during 1994.

According to the Organization of Economic Cooperation and Development (OECD), government assistance to farmers in 1993 decreased 15 percent from 1992 levels to \$CAN 6.1 billion. Government support for grain and oilseed producers was reduced with smaller outlays for the Gross Revenue Insurance Plan (GRIP) stabilization program and Western Grain Transportation Act (WGTA) rail subsidy. In 1994, elimination of the National Tripartite Stabilization Program (NTSP) for cattle and hog producers will continue the trend of reduced government expenditures on agriculture.

Higher market returns expected for livestock will boost 1994 farm income to near 1993 levels, despite the decrease in government payments, while improved quality of the 1994 wheat and barley crops may offset the expected price declines. According to Agriculture Canada, net farm cash income is forecast to range between \$CAN 6.4 and \$CAN 7.7 billion in 1994.

Under the recently completed Uruguay Round of the General Agreement on Tariffs and Trade (GATT) negotiations, Canadian agriculture is expected to be a net beneficiary with trade gains occurring in grain, oilseed, and livestock products. The agreement is scheduled to go into effect as early as January 1, 1995, and may cause modifications in Canadian agricultural policies. The WGTA rail subsidies must be reduced 36 percent on expenditures and 21 percent on volume, for shipments to West Coast ports from 1995 to 2001, according to the export subsidy reduction commitment specified under the GATT Final Act. However, Canada is currently debating whether to change the WGTA method of payment, shifting the federal subsidy from the railways to the farmer. This would make the WGTA an internal support program, subject to little, or no reduction under the Final Act. Additionally, as part of the GATT agreement, Canada converted dairy and poultry quotas into tariff-equivalents. Canada had previously resisted this action, arguing that its supply management policies for these sectors would be undermined by tariffication. Canada's Meat Import Law



was also converted into a tariff-rate quota, whereupon a 37.9 percent ad valorem tariff will be applied on beef imports above 72,000 tons, beginning January 1, 1995.

U.S.-Canadian agricultural trade continues to expand following implementation of the U.S.- Canada Free Trade Agreement (CFTA). Tariffs on agricultural goods have been reduced at least 60 percent since the January 1, 1989 implementation date. The value of agricultural trade between the two countries has increased 75 percent since 1988 to almost \$10 billion in 1993. Significant trade gains have occurred in livestock, grains, oilseeds, fruits, and vegetables.

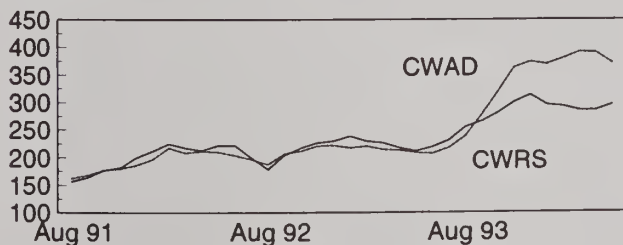
Since November 1993, the U.S. and Canada have held a series of meetings to address the continuing agricultural trade disputes between the two countries. Rather than discussing a single issue, the meetings have attempted to resolve a package of disputes all at once, with a multi-year, Framework Agreement. These disputes include imports of wheat, barley, peanut butter, and sugar-containing products from Canada as well as the restricted market access of U.S. dairy and poultry exports into Canada.

## Wheat

For the second consecutive year, crop conditions were less than optimal for wheat production and the 1993 crop again yielded an overabundance of low-quality wheat. Additionally, vast stocks of feed wheat already were present because of the poor 1992 crop, despite feed wheat sales of 4.3 million tons. Because of this and another low protein crop in the United States, there have been large price premiums for high-protein wheat during the 1993/94 crop year. High price premiums also developed for durum wheat relative to spring wheat in 1993/94, a consequence of low stocks caused by significant declines in world durum production during 1993/94, primarily in the European Union (EU) and United States (figure 1).

Nevertheless, the sharply reduced 1993 corn crop in the United States permitted the Canadian Wheat Board (CWB),

Figure 3.1  
Canadian Wheat Board Asking Prices for  
Spring and Durum Wheat  
Can\$/MT



CWRs 13.5 Protein: No.1 Canadian Western Red Spring  
CWAD: No. 1 Canadian Western Amber Durum  
Basis in Store, St. Lawrence

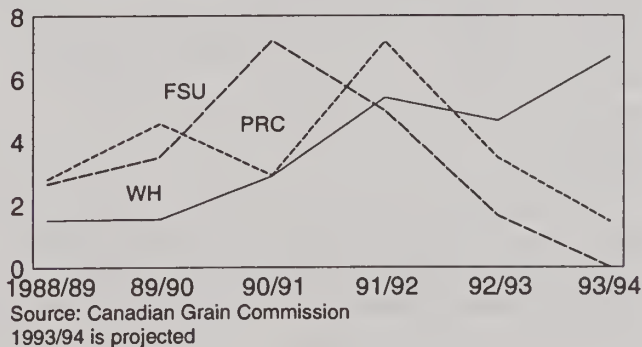
Canada's wheat and barley exporting monopoly, to find an outlet for some of its feed quality wheat. USDA forecasts 1993/94 (July-June) U.S. wheat and wheat product imports, almost entirely from Canada, to be a record 2.85 million tons, an increase from 1.85 million tons in 1992/93. The large expansion in wheat imports from Canada has caused the United States to consider implementing a Section 22 import restriction on wheat.

Currently the U.S. International Trade Commission is investigating whether imports of wheat, wheat flour, and semolina are materially interfering with the USDA wheat program. Since Section 22 import quotas or fees will be removed when the Uruguay Round provisions are implemented, the United States, also notified the GATT that it intends to raise tariffs on wheat, barley, and their respective products under GATT Article 28. The article defines the process by which a country can withdraw or modify a previous tariff binding, including conversion of a fixed tariff to a tariff-rate quota, in which the tariff on the above-quota amount would exceed the previous binding. However, GATT Article 28 would entitle Canada to seek compensation by raising its tariffs on other commodities.

For the second straight year, Canada's wheat exports to the Former Soviet Union (FSU) and People's Republic of China (PRC) were down dramatically in 1993/94. These two countries were historically 50 percent of Canada's wheat export market. However, Canada has expanded significantly into the Western Hemisphere in recent years. Brazil, Chile, Columbia, Ecuador, Mexico, and the United States are all now importing more Canadian wheat than 5 years ago (figure 2). Nevertheless, wheat exports from West Coast ports have been severely interrupted during 1993/94, first by a rail car shortage then by a longshoreman's strike.

In 1994, Canada's overall wheat area is expected to decline as producers diversify into a variety of other crops. However, substantial area shifting into durum at the expense of spring wheat is anticipated. Relative to spring

Figure 3.2  
Canadian Wheat and Flour Exports to  
Western Hemisphere, PRC, and FSU  
Million metric tons



Source: Canadian Grain Commission  
1993/94 is projected

wheat, durum prices are currently higher while stocks are lower. According to the March 1994 Statistics Canada Planting Intentions Survey, farmers are planning to seed 5.5 million acres of durum, a 52.7 percent increase over 1993. An increase in high quality wheat is also expected in 1994 with a return to a normal crop quality profile.

## Coarse Grains

Canada's coarse grain production rose in 1993, as barley and oats exhibited substantial increases above 1992 levels. Both crops gained area at the expense of wheat, and oats reached record yields. A return to normal growing conditions in Eastern Canada allowed corn production to recover in 1993. The 1992 crop was devastated by a cool, wet growing season and adverse harvesting conditions, causing imports to rise dramatically.

The United States was an important market for Canadian barley in 1993/94, as reduced U.S. coarse grain production increased import demand. This occurred in spite of competition with Canadian feed wheat. The temporary removal of barley export sales to the United States from Canadian Wheat Board control during August 1993 also promoted a sharp escalation in barley exports to the United States, mainly through private contracts. The Canadian Wheat Board (CWB) regained its monopoly over barley exports as a Federal Court judge overturned the Cabinet order made in July 1993 that removed the CWB monopoly on U.S. barley sales. The ruling noted that the federal government exceeded its authority and any changes to CWB operations must be approved by Parliament. Exports of oats, mostly to the United States, rose to a record in 1993/94. U.S. oat production declined in 1993, as area continued to fall and yields were affected by poor weather during seeding and throughout the summer.

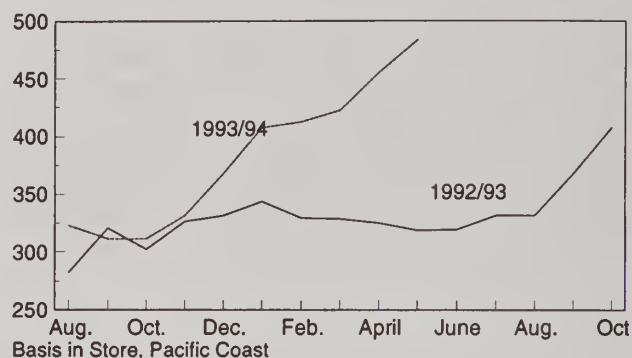
Canada's barley area is expected to decrease in 1994, with higher returns anticipated from durum and canola. Barley beginning stocks are at their highest in 10 years, causing lower expected prices for the 1994/95 crop year. Exports are also forecast to decrease with reduced U.S. demand and the European Union continuing to subsidize exports to reduce stocks. High beginning stocks and a return to normal yields will cause oats production to decrease in 1994. Exports of oats will decline as U.S. production rises with better weather and Scandinavian countries aggressively subsidizing exports. Corn area is expected to increase slightly in 1994, nevertheless Canada is projected to be a net importer of corn with higher domestic usage.

## Oilseeds

The big story for Canadian grain and oilseed production in 1993 was the tremendous growth in canola or rapeseed production, as seeded area reached record highs. Canola acreage rose to 4.1 million hectares, a 41 percent increase

from 1992. Even with abundant production, higher returns were being realized, as the poor U.S. soybean crop drove Canadian canola prices to above \$CAN 400 per metric ton on the Winnipeg Commodity Exchange by early 1994 (see figure 3). The 2 consecutive years of below-average oil extraction rates and tight world vegetable oil supplies boosted canola prices, which are relatively more dependent on vegetable oil prices than soybeans. Canola yields a higher proportion of oil than soybeans, approximately 40 percent versus 18 percent for soybeans.

Figure 3.3  
**Canadian Canola, No. 1, Cash Price**  
**Winnipeg Commodity Exchange**  
Can\$/MT



Canola exports increased with Mexico, the EU, and the United States showing significant gains in 1993/94. The United States should continue to be an important market in the future with the reopening of a canola crushing plant in Velva, North Dakota, and the growing U.S. acceptance of canola oil as a healthy vegetable oil. Japan remains the primary export destination for Canada's canola but in recent years Japan has sought to diversify sources. Australia, Argentina, and the EU also exported canola to Japan during 1993/94.

Excellent weather in Canada's dominant soybean producing province of Ontario, combined with record area, resulted in record soybean production in 1993. High U.S. soybean prices provided indirect support to Canadian prices despite the production increase. Because Eastern Canadian oilseed crushers have limited capacity, the increase in output meant greater exports, primarily to the United States in 1993/94.

Canola area is forecast to reach a record again in 1994 as the high prices encourage farmers, some of whom planted canola for the first time in 1993, to make it a permanent part of their rotations. Additionally, more newcomers to canola are expected with the success of the 1993 crop. Exports are anticipated to be similar to 1993/94, with Japan continuing to diversify its imports, sourcing more from Australia, while exports to Mexico and the United States expand. With continued robust soybean prices expected, Canadian soybean area is forecast to rise slightly from the 1993 record.



## Beef and Pork

In 1993, the Canadian beef cattle industry benefited from high prices and low feed costs due to the plentiful supply of feed wheat. Cattle and calf numbers continued to expand, making the July 1993 inventory the highest summer level since 1977. The availability of feed wheat, coupled with a sharply reduced U.S. corn crop, caused more feeder cattle to be fed in Canada rather than the United States.

A large increase in beef imports from Australia and New Zealand partially displaced U.S. beef exports to Canada in 1993. Canada imposed a tariff rate quota on non-U.S. boneless beef imports for May 1 to December 31, 1993, after the Canadian International Trade Tribunal determined that the imports would seriously injure Canadian slaughterers and cattle producers if they remained at the current level. Non-U.S. imports exceeding 48,000 tons faced a 25 percent ad valorem tariff during the rest of 1993.

Cattle inventories are projected to increase again in 1994, continuing the expansion phase of the cattle cycle. Feed costs will rise with less feed wheat available but adequate supplies of barley and corn will moderate the increase. The tariff rate quota on non-U.S. boneless beef imports will continue in 1994, with non-U.S. imports over 85,000 tons subject to the 25 percent ad valorem tariff.

Hog inventories increased in 1993, as lower feed costs promoted herd expansion. However, the increase in live hog exports to the United States caused slaughtering to decline and consequently, pork production and exports were reduced. Live hog exports are forecast to increase in 1994 since the U.S. Commerce Department has lowered the countervailing duty (CVD) on Canadian hogs from \$CAN 9.27 per hundredweight to \$CAN 1.31, based on fiscal year 1991. Despite the expected increase in live hog exports in 1994, pork exports are also anticipated to rise with no growth in domestic consumption.

## Dairy and Poultry

Both the dairy and poultry sectors in Canada utilize supply management policies that set production quotas to meet anticipated demand. These production quotas allow Canada's dairy and poultry farmers to receive prices based on the cost of production. Imports are restricted by quotas, permitted under GATT Article XI, which allow import quotas when production controls are used. Under the December 15, 1993, GATT accord, all non-tariff barriers, including GATT Article XI import quotas, must be converted to tariff-equivalents beginning July 1, 1995. Hence, Canada agreed to impose tariffs on its import quotas for dairy and poultry. However, the tariff-equivalents submitted by Canada were extremely high and it is highly unlikely that future import access will exceed required initial 3 percent of the 1986-88 average consumption in

1995, rising to 5 percent in 2001. In all cases, Canada reduced tariffs on poultry and dairy products by only the minimum 15 percent.

The United States believes its market access can be greatly enhanced under terms of the CFTA, which does not allow tariffs to be raised on either country's products and calls for complete elimination of tariffs by January 1, 1998. However, Canada believes the GATT agreement would take precedence over the CFTA, while the U.S. feels that Canada is bound by the CFTA. Currently, the U.S. and Canada are involved in negotiating a compromise on the tariff levels and the timing for elimination.

Canadian dairy producers receive a direct payment as part of a federal program supporting their price received for industrial milk, known as the target price. Industrial milk is used to make dairy products such as butter, cheese, yogurt, ice cream, and skim milk powder. As part of the federal government's budget reducing measures, the direct payment will be reduced 20 percent over 4 years, which began with the 1993/94 (August/July) dairy year. Nevertheless, the target price was increased for 1993/94, as the support price for skim milk powder was raised to offset the decrease in the direct payment. The Canadian Milk Supply Management Committee increased the Market Share Quota (MSQ) by 2 percent for the 1993/94 dairy year, the first MSQ increase since 1988/89. The MSQ is the national production quota for industrial milk. The primary reason for the expanded MSQ for 1993/94 is the anticipated shortage of butterfat, caused by unexpected low milk production in Ontario, a positive response to butter promotional efforts, and fewer cross-border shopping trips into the United States by Canadian consumers.

Rising chicken consumption in 1993 led to a significant increase in the national quota as established by the Canadian Chicken Marketing Agency. Part of the demand increase was due to the Canadian dollar depreciating against the U.S. dollar, sharply curtailing cross-border shopping of chicken in the United States. Production is forecast to expand in 1994, based on the continued popularity of chicken among consumers, the innovation of new chicken products, and a low Canadian dollar.

Turkey production declined in 1993 as the Canadian Turkey Marketing Agency (CTMA) lowered the production quota to reduce high storage stocks of frozen turkeys. Output is projected to rebound in 1994 with the CTMA setting the 1994 production quotas higher with beginning stocks down significantly from 1993.

Table egg production increased in 1993 for the first time in 5 years as consumption rose after several years of declines. In response, the Canadian Egg Marketing Agency increased the domestic production allocation for 1994. In addition, the federal government began issuing supplementary import permits for table eggs for domestic egg processors for the first time since 1988.

Table 3.1  
Production of major Canadian grains and oilseeds

Commodity	1991/92	1992/93	1993/94	1994/95	Change from 1993/94
----- Million Metric Tons -----					Percent
All wheat 1/	31.95	29.87	27.80	26.0	-6.47
Durum	4.59	3.14	3.36	4.47	33.04
Barley	11.62	11.03	13.30	11.5	-13.53
Oats	1.79	2.82	3.62	3.20	-11.60
Corn	7.41	4.88	6.30	6.50	3.17
Canola	4.22	3.87	5.40	6.43	-19.07
Soybeans	1.46	1.16	1.85	1.88	1.62
Total	58.45	53.63	58.27	55.51	-4.74

1/ Includes durum

Source: USDA, Agriculture Canada, Statistics Canada

Table 3.2  
Exports of major Canadian grains and oilseeds

Commodity	1991/92	1992/93	1993/94	1994/95	Change from 1993/94
----- Million Metric Tons -----					Percent
All wheat 1/	24.48	19.71	18.0	19.5	8.33
Durum	2.88	2.27	2.8	3.3	17.86
Barley	3.69	3.03	4.0	3.30	-17.50
Oats	0.35	0.78	1.20	0.70	-41.67
Corn	0.99	0.18	0.60	0.20	-66.67
Canola	1.86	1.85	2.80	3.30	17.86
Soybeans	0.25	0.22	0.60	0.54	-10.00
Total	31.65	25.77	27.2	27.54	1.25

1/ Includes durum

Source: USDA, Agriculture Canada, Statistics Canada

Table 3.3  
Canadian grain and oilseed imports 1/

Commodity	1991/92	1992/93	1993/94	1994/95	Change from 1993/94
----- Thousand Metric Tons -----					Percent
All wheat 2/	20	90	90	90	0.00
Durum	0	0	0	0	0.00
Barley	2	3	4	0	-100.00
Oats	2	3	0	0	0.00
Corn	218	1,239	300	500	66.67
Canola	41	160	50	25	-50.00
Soybeans	72	175	50	80	60.00
Total	355	1,610	494	695	40.69

1/ August/July marketing year.

2/ Includes durum

Source: USDA, Agriculture Canada, Statistics Canada



## Argentina

***Notable achievements in expanding the economy and controlling inflation have resulted from the economic reform efforts undertaken by the current Argentine government. The import substitution strategy, employed for nearly 50 years has been replaced by a strategy to create a market-oriented economy where domestic firms and producers are competitive in the international market. Despite the elimination of significant disincentives to production, the agricultural sector has not been a strong participant in the expanding Argentine economy. [Dave Peacock]***

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### Macroeconomic Developments

Argentina's economic reforms, which began in 1989, continue to achieve some notable successes. The economy is growing at a healthy pace and the nation's grip on its old archenemy, inflation, grows tighter every month.

The growth of the Gross Domestic Product (GDP) far exceeded most projections for 1991 and 1992, reaching nearly 9.0 percent per annum. The final estimate of 1993 growth, although somewhat slower, is still expected to be at least 5.0 percent. Given the economy's performance since 1991, it is increasingly reasonable to anticipate GDP expansion at 5.0 percent or more for 1994 and beyond. To provide a perspective for assessing the country's economic expansion, it is worth noting that this growth trend is separated by only a few years from declines in the GDP in 1988 and 1989.

Argentina's success in gaining control of inflation since 1991 is equally remarkable. The steady progress is demonstrated by the slowing of inflation for consumer prices for the recent 12 months ending in February 1994 to 5.8 percent as compared with 13.5 percent for the equivalent period ending February 1993. The magnitude of Argentina's accomplishments is best illustrated, however, by comparing these recent inflation numbers with statistics for earlier periods. Annual inflation for the 12 months ending February 1992 was 41.6 percent, down from 582 percent for the prior 12 months. Consumer price inflation for the 1989 calendar year had reached 4,929 percent.

Wholesale price inflation has also decreased rapidly, falling from 349 to 4 percent for the 12 months ending in February of 1991 and 1992 respectively. By February 1994 the wholesale price index had declined by 1.7 percent.

Argentina's new policy directions were initiated when the economy suffered from unprecedented inflation, little or no economic growth, and a burdensome external debt. For almost 50 years the Government of Argentina (GOA) had relied on active government intervention in the economy to

promote a strategy of import substitution, thought to be the appropriate model for generating rapid economic growth. Recognizing the failure of this strategy, the GOA embarked on a campaign to deregulate, decentralize, and privatize the economy in 1991. The underlying assumption is that Argentine enterprises, unhampered by government intervention and spurred by competition from abroad, will become more efficient in the production and marketing of both domestic and export goods.

Improvements in management and expanded investment in modern technology are expected to make Argentine enterprises as productive and efficient as their foreign competitors. Clearly, not all enterprises or segments of the population are adapting equally well to the nation's new economic conditions. The poor have benefited from the slowing price inflation for basic necessities, but the lower middle class have experienced less job security as former State firms reorganize in the process of privatization and private firms restructure to increase efficiency. Small and medium firms are finding it more difficult to adjust to import competition and secure credit for modernization than their larger counterparts. The economy in the provinces is not as buoyant as in the Capitol.

The Convertibility Law, passed by the Argentine Congress in April 1991, is a key to the Menem Administration's new economic program. The best known component of this Law is the provision that guarantees all comers free access to foreign exchange, at a fixed rate of essentially 1 Argentine peso to the U.S. dollar. Prior to the Convertibility Law, dollar export earnings were converted to Argentine currency (then called the austral) at a rate determined by the GOA. Such rates seldom reflected the true purchasing power of the austral and, in effect, became an export tax levied by the Central Bank rather than the Treasury. Equally important is that the law requires the monetary base to be fully backed by gold and foreign currency reserves, disciplining the expansion of the money supply. The law also prohibits indexation and emphasizes fiscal discipline.

The GOA has managed to maintain its currency value on a par with the U.S dollar since the Convertibility Law passed. While the peso's convertibility may have contributed to economic stability, it has probably resulted in an overvaluation of the Argentine currency relative to its trading partners. Since April 1991 domestic consumer prices have increased 54 percent, yet no devaluations have been permitted under the Convertibility Law. The GOA has steadfastly refused to bow to pressures to devalue, arguing that domestic enterprises can and should reduce costs and improve efficiency to compete with foreign suppliers.

A cloud on the macroeconomic horizon continues to be Argentina's balance of trade. While Argentina has typically managed a positive trade balance, imports exceeded exports by \$2.6 billion in 1992. A trade deficit of \$3.7 billion has been reported for 1993. Government officials argue that the higher trade deficit should not be alarming given that Argentine companies are investing in foreign capital goods to modernize plants and equipment. In fact, both the absolute amount of capital goods and the ratio of capital goods to consumer goods in imports have increased since 1990. Because of the country's attractiveness to both long term (including privatizations and other direct foreign investment) and short term investment, Argentina's overall balance has been positive despite its trade shortfall.

### **Agricultural Policy**

Beginning in 1991, the GOA eliminated the policies and institutions that were used to transfer wealth from the agricultural sector to the Treasury and the industrial sector. The policy reforms of the current administration have ended taxation of agricultural exports and government intervention in agricultural marketing.

Historically Argentina has taxed agricultural exports both directly with taxes on the f.o.b. value of shipments and indirectly through various exchange rate regimes. Export taxes on major agricultural and agroindustrial products were eliminated in 1991, except for unprocessed oilseeds which continue to be taxed at a rate of 3.5 percent. The elimination of export taxes reflects a dramatic change in GOA policy goals since 1989 when the taxes on wheat, corn, sorghum, and soybeans were equal to 85 percent of production value. Even the 1.5 percent levy on exports used to support INTA, the agricultural research and extension agency, was eliminated in November 1992 in favor of financing the Institute from general tax revenues. At the same time, the Convertibility Law has eliminated the possibility of indirect taxation by manipulating the exchange rate.

The formal elimination of the National Grain Board and Meat Board, once important institutions for implementing government policy, was mostly symbolic, but signaled the

government's commitment to market oriented agriculture. Both Boards already had been reduced to maintaining standards, collecting and publishing statistics, and providing analysis to policymakers. More important is the GOA's effort to divest its interests in grain elevators, grain storage, and stockyards. By selling and leasing these government-owned facilities to private firms the government has removed itself from direct participation in agricultural marketing. More importantly, it is hoped that private initiative and investment will find ways to reduce what have long been believed to be excessive costs of marketing agricultural products.

In a country where approximately half of the wheat, corn, and sorghum crops and nearly all of the soybeans and soybean products are exported, the removal of export taxes should stimulate significant investment and output expansion. However, little investment appears to be occurring. This may reflect a decline in the sector's real return on investment, as costs have risen and gross revenues have remained flat. The fixed exchange rate, which has implicitly overvalued the Argentine currency, reduces the real peso return to the agricultural products sold on the world market for dollars. Finally, domestic taxes have also increased, along with improved tax collection, and farmers can no longer expect the real value of their tax obligations to be reduced by inflation.

In October 1992, the GOA established an export rebate system to make agricultural and industrial products more competitive on the world market by offsetting the effects of internal taxes (such as the value added tax) that increase domestic production costs. The export rebate for corn, wheat, sorghum, and oilseed byproducts is 2.5 percent of the f.o.b. price. While unprocessed soybeans do not receive a rebate.

Recognizing that the farm sector may well be struggling, the GOA announced additional policies in August 1993, to alleviate some financial stress faced by farmers. These included:

- Eliminating the asset tax on land in agreement with participating provinces, who will reduce and harmonize provincial and municipal property taxes.
- Reducing the withholding of the value added tax (IVA) from 10 to 6 percent for most producers and from 7 to 5 percent for fruit producers. Farmers can also opt to pay their IVA obligations once a year.
- Reducing the statistical tax on imported agricultural inputs from 10 percent to 3 percent. Agricultural inputs considered capital goods, such as semen,



embryos, and seed are exempt from both import duties and the statistical tax.

- Setting a cap on pension payments made for workers in the cotton, sugar, wool, and tobacco sectors.
- Offering US \$ 300 million in mortgage loans through the National Bank. Producers will be able to borrow up to 70 percent of the assessed value of assets and receive 7 year loans at rates below 10 percent per annum; fees will be covered by the GOA. These loans are intended for heavily indebted farmers who need to restructure their debt.

## Wheat

Area devoted to wheat in Argentina was 4.8 million hectares for 1993, considerably short of the peak planted area of 7.3 million hectares registered in 1982 when Argentine wheat output was 15 million metric tons (mmt) and exports reached nearly 10 mmt. Expectations are for 1994 planted area to be about the same as 1993. Barring a repeat of the erratic weather that complicated the 1993 growing season, 1994 production should reach 10 mmt as compared with the previous harvest of 9.5 mmt. Both 1993 estimates and 1994 projections are up from the area harvested and production recorded for 1992, when output was reduced by low prices and excessive rains at planting. The 1993 and 1994 numbers do not suggest that any medium-term trend is developing in either area planted or production.

Grain quality for the 1993 harvest has been highly variable by region. Some regions reported a poor to fair quality crop with 20-30 percent of the crop showing fusarium damage, while others reported more optimistic assessments of grain quality. Some complaints of grain quality were heard from Brazil. A recent USDA study indicates that Brazilian millers and importers prefer the quality of U.S. or Canadian wheat, but since price is such an important consideration in their market, Argentina has become their major supplier.

Brazil has historically been an important market for Argentine wheat. Except for the early 1980's, when the USSR was the dominant purchaser of Argentine wheat, Brazil typically has accounted for 20 to 30 percent Argentina's wheat exports. Even in the late 1980's when Brazil was aggressively pursuing policies to stimulate its own production and reduce dependence on imports, it still represented a significant share (nearly 25 percent) of Argentina's wheat export market. In 1990, Brazil's government decided to markedly reduce its support to wheat producers. Since then wheat area planted by Brazilian farmers has fallen and the country has become

increasingly dependent on wheat imports; the majority provided by Argentina. By 1991, Brazilian imports represented 51 percent of Argentina's wheat exports. More recently, Latin America has accounted for approximately 80 percent of Argentine wheat exports, with Brazil alone accounting for about 70 percent or 3.0 to 3.3 mmt.

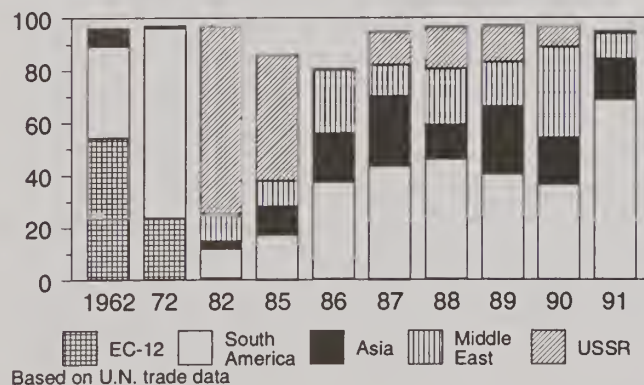
Argentina has become increasingly dependent upon Brazil and Latin America as a market for its wheat. In the 1960's and early 1970's the EC-12 countries represented a significant share of Argentina's wheat exports. By 1975, imports by these countries were no longer an important outlet for Argentine wheat. In fact the EC-12, as a region, has since become a major wheat exporter. Beginning in 1980, the USSR was the most important wheat market for Argentina. At that time the USSR had the resources to purchase significant quantities of Argentine wheat. With the financial difficulties that have befallen the former Soviet Union and the countries that have succeeded it, the region is no longer a viable market for Argentina, which is unable to offer credit or food assistance.

While Argentina has cultivated the Middle East and Asia (dominated by the highly variable imports of China) in an effort to expand its wheat market, it has become increasingly closely tied to trade with Latin American, and more particularly wheat exports to Brazil (figure 4.1). This is the basis of Argentina's concern that Brazil neither be offered nor accept imports of subsidized wheat from third countries. Argentina has asked Brazil to investigate imports of Canadian and German wheat for possible subsidies representing unfair competition. Under the MERCOSUR accord, member countries can request an anti-dumping and anti-subsidy investigation on another member country's imports from exporting countries using such practices.

Brazil has recently announced that it will increase its import tariff on wheat from 10 to 17 percent during the Brazilian harvest period of mid September through January. Wheat imports from Argentina, as a MERCOSUR partner, will be exempt from the seasonal tariff increase.

Figure 4.1

### Market Shares of Argentine Wheat Exports Percent



## Corn

The largest area planted to corn in Argentina, 4.0 million hectares, dates back to 1969 and 1970. After having declined to less than 2.0 million hectares by 1988-89, area devoted to corn has rebounded to about 2.5 million hectares. Outlook for the 1993 crop is for a harvest of around 10.5 mmt. Forecast area and production are expected to be similar for the next cropping season.

Yields of Argentine corn are about 60 percent of U.S. yields, but exhibit a steady up trend. Traditionally Argentina has produced a rather low yielding hard flint type corn. Recently, seed companies have been introducing shorter season, dent and semi-dent varieties which incorporate both Argentine and U.S. germ plasm and promise higher yields. With new corn hybrids that are more responsive to fertilization, average yields should continue to rise.

The EC-12 countries were the dominant market for Argentine corn through 1978. Since then EC corn imports have been far smaller (figure 4.2). For 1980-83 the decline in exports to EC-12 countries were more than offset by USSR purchases. By 1989, the USSR had disappeared from Argentina's corn market, and the EC countries represented less than 20 percent of export. In recent years Argentina has faced a more dispersed corn market with larger export shares being accounted for by South America, the Caribbean (mostly Cuba with a 30 percent market share in

1989) and the Middle East. While important, Brazil is not the overwhelming portion of the South American corn market as in the case of wheat.

## Soybeans and Products

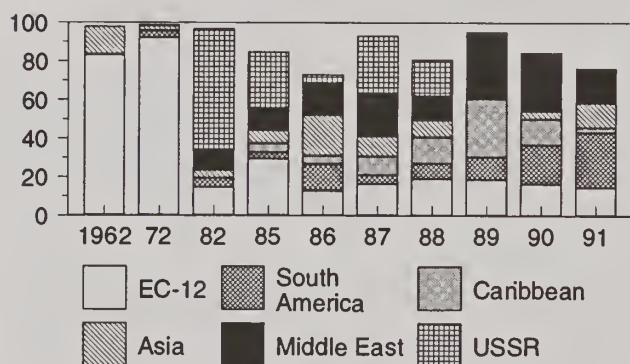
Argentina vies with Brazil for the position of the world's second or third largest exporter of soybeans (the United States is the largest). Argentina is the world's second largest exporter of soybean meal, behind Brazil and ahead of the United States. Finally, it is the undisputed leader in exports of soybean oil. This is all the more remarkable since Argentina had only 36,000 hectares of soybeans in 1970.

While area devoted to soybean production is continuing to expand, expected growth will not compare to the meteoric rise experienced in the 1970's and 1980's. Soybean area expanded by 25 times during the 1970's, reaching 1.7 million hectares by 1980. Then, in the 1980's farmers more than doubled this area again to reach 4.7 million hectares by 1990. Planted area for the 1993/94 crop year is expected to be 5.5 million hectares and production is expected to reach a record 12.2 mmt in output (up from 11.0 million for the previous year). Argentine soybean yields are on a par with those achieved in the United States.

Most of Argentina's soybeans will be crushed and exported as meal and oil. Only about a quarter of production will be exported as unprocessed soybeans. Most exports of soybeans and oil meal are shipped to Europe. About 70 percent of unprocessed soybeans went to the EC-12 countries. The USSR was an important soybean purchaser in 1980-84. For oil meals (soybean and other oilseed meals) the EC-12 countries are again the dominant market. EC-12 nations represented 60 percent of oil meal exports from Argentina in 1991 and even larger shares in earlier years. By contrast the most important market for Argentina's soy oil are other South American countries, followed by Asia and the Middle East. Since Brazil and Paraguay are also both exporters of soybeans and products, there is no opportunity to place exports within the MERCOSUR regional market.

Figure 4.2

### Market Shares of Argentine Corn Exports



Based on U.N. trade data



## Mexico's PROCAMPO Agricultural Reform Program

***In October 1993, within the framework of the National Economic Development Plan Pact for Stability, Competitiveness and Employment (PECE), Mexico implemented PROCAMPO (Programa de Apoyos Directos al Campo), a program to decouple Mexican agricultural support by making direct payments per hectare. The PROCAMPO program replaces the traditional price support system based on high guaranteed and agreed upon minimum prices (which generally exceeded the world market price). PROCAMPO matches the NAFTA and GATT goals of domestic support measures that have minimal or no trade-distorting effects. [Constanza M. Valdes]***

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Under the new PROCAMPO program, the government will make direct payments to farmers based on the number of planted hectares of corn, beans, wheat, rice, cotton, soybeans, safflower, barley, and sorghum. Estimated acreage to benefit under the PROCAMPO program represents 70 percent of total cultivated area in Mexico. The payment rate will be based on fixed average yields. Payment rates per hectare will be held constant in real terms for a period of 10 years, and will be phased out in equal installments from year 11 to year 15.

The program will be phased in during 1993/94, and will be fully operational by 1995. Under the program, producers are scheduled to receive Mex\$330 per hectare planted in 1994, and Mex\$350 per hectare planted in 1995. To cover marketing costs, rice and sorghum producers will receive budgetary transfers. Differential payments by region will be introduced in 1995.

The limits on the acreage eligible to receive the direct payments are consistent with the system of agrarian land-holding. The 100-hectare limit will be maintained on irrigated land, while corporations may hold title on up to 2,500 hectares of irrigated land. Land can also be used for livestock, forestry, aquaculture, or ecological conservation and still be eligible for PROCAMPO benefits. Under PROCAMPO the government also announced it will forgive roughly US\$650 million in overdue loans.

Additional reforms have been announced as the government has implemented the program. In February 1994, the government added US\$5.3 billion to the original agricultural budget of US\$3.5 billion to cover additional expenses under the PROCAMPO program and the land title allocation process. Last year's total subsidy to agriculture was US\$2.1 billion.

The impact of the PROCAMPO reform program will not be known at least until the second half of 1994, but it is already resulting in some changes. Cropping patterns

that had reflected the favorable treatment of corn and beans are being altered. In Sinaloa, 20,000 hectares of irrigated land were converted from corn to wheat. In Sonora, 12,000 hectares were switched out of corn into wheat and 20,000 hectares into cotton. In Nuevo Leon, 15,000 hectares have been added to barley acreage.

The government has acknowledged that a major difficulty in implementing the program is the management of the producers registry. For producers to be included in the registry, they originally had to prove ownership of the land, but the government still has a backlog of land title applications from ejidatarios. Also a large number of farmers in remote areas remain uninformed of the registration requirement. The government estimates the number of eligible farmers at 3.3 million.

As a result of the difficulties in certifying property rights and PROCAMPO eligibility, early this year the government trained 7,200 officials and gave control of determining eligibility for producers to the Social Comptrollers Committee. The Committee is 45,600 representatives, elected from and by the producers. In addition, producers may present a certificate from the municipality attesting to their property rights, instead of the title itself.

As of June 1994, and to cover the fall/winter 1993/94 cycle, PROCAMPO had made payments to 745,563 producers of corn, beans, wheat, sorghum, soybeans, rice, and cotton, (representing 92 percent of all applications submitted) on a total of 3.2 million hectares. The total value of the payments for the fall/winter 1993/94 cycle was over Mex\$1.1 billion. Producers who planted program crops on the same hectareage with fruit trees and/or coffee received payments based on 25 percent of total area planted. Disbursement of the payments to cover the spring-summer 1994 cycle are scheduled to begin July 1, 1994, although 3,673 producers in Zacatecas have already received payments of Mex\$5.7 million.

More recently, and to cover the spring-summer crop cycle, the government announced that up to 50 percent of future PROCAMPO payments received by producers can be used as collateral for 90-day credit to purchase inputs (seeds, fertilizers, pesticides, technical assistance), to finance production activities and/or marketing eligible crops. As of June 1994, producers in Chiapas (a total of 180,000 producers), Zacatecas (22,000 producers), Sinaloa (6,000 producers), Durango (1,500 producers), Yucatan (906 producers), Aguascalientes (511 producers), San Luis Potosi (350 producers), Sonora (150 producers), Nayarit (122 producers), Jalisco (105 producers), and Baja California Sur (70 producers) have benefited from this reform. A total of 213,064 producers have received credit using PROCAMPO payments as collateral, representing over Mex\$224 billion.

ERS analysis suggests that Mexico's PROCAMPO reform plan will lead to lower producer and consumer prices for all program crops. Lower prices will result in reductions for both irrigated and rain-fed area planted to corn. The amount of change will differ among subsistence and commercial producers. Lower real and relative prices for corn will reduce the area planted to corn, lower production, raise consumption, and increase corn imports.

Under PROCAMPO, farmers will make production choices based on market prices rather than government-set prices. The plan decouples income support from current production, because payments to farmers will be fixed in real terms and based on the amount of land a producer devoted to eligible commodities in the 3 years prior to December 1993. It thus eliminates the incentives for farmers to plant crops in tropical rain forests or to expand production on marginal lands susceptible to erosion. The program eliminates incentives to use excess amounts of fertilizers or pesticides, because payments are based on historical rather than current yields.

Subsistence farmers, who consume most of their crop output on-farm, generally have not benefited from Mexico's guaranteed price-support system. PROCAMPO increases income support to close to 2.5 million subsistence farmers. By limiting the area eligible for benefits, PROCAMPO more effectively directs support payments to those who need them most.

Table 5.1  
Support prices for agricultural commodities under PROCAMPO

Commodity	Fall/ winter 1992/93	Fall/ winter 1993/94	Spring/ summer 1994
New pesos per metric ton			
White corn	750	650	600
Non-white corn	625	540	500
Dry beans			
Preferential	2,100	1,800	1,600
Nonpreferential	1,900	1,595	1,415
Wheat	640	600	600
Soybeans	940	856	856
Sorghum	400	400+50 <sup>2</sup>	n/a
Rice	1,000	AMP+74 <sup>3</sup>	n/a
Cotton	AMP <sup>1</sup>	970	n/a

<sup>1</sup>Average market price

<sup>2</sup>Sorghum producers will receive an additional payment of \$50 per ton to cover marketing costs.

<sup>3</sup>Rice producers will receive an additional payment of \$74 per ton to cover marketing costs.

Sources: SARH, PROCAMPO, Vamos al Grano Para Progresar, Mexico, 1993.

Government of Mexico, Quinto Informe de Gobierno, Mexico, 1993.

U.S. Dept. of Agriculture, Foreign Agriculture Service, Office of the Agriculture Counselor, MX3122. Mexico City.



## Mexico

***Mexico's policy reforms, including liberalizing trade restrictions and reducing direct subsidies, are designed to move the farm sector in a more market-oriented direction. Trade reforms under NAFTA and domestic reforms under PROCAMPO will alter the structure of Mexican agriculture, providing incentives for production of high-valued farm products, and lowering domestic prices of other crops. [Constanza M. Valdes]***

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### Introduction

During 1993, Mexico continued to make progress in the implementation and consolidation of structural reforms involving financial and trade liberalization, privatization of public enterprises, deregulation of the land tenure system, and substantial reduction of agricultural subsidies. Also, public sector finances continued to be in surplus, the balance of payments strengthened, and inflation was reduced to 8 percent, attaining single-digit inflation for the first time since 1972. However, the economic slowdown begun in 1992 intensified.

The North American Free Trade Agreement (NAFTA), which became effective in January 1994, sets a maximum of 15 years to phase out barriers to agricultural trade. Under the agreement there will be reciprocal trade liberalization for agriculture between Mexico and the United States and Canada. Implementation of the NAFTA should bring about increased capital inflows and increased government spending in real terms. As a result, effective demand for food is likely to be stronger and more stable than in the past, creating more sustained pressure on food supplies and prices.

NAFTA is expected to have the most immediate impact on Mexican imports of beef, cattle, and sorghum from the United States, entering the Mexican market duty-free immediately. A select number of Mexican imports of U.S. agricultural commodities will enter Mexico subject to a tariff rate quota (TRQ). These commodities include corn, poultry, pork, among others. The TRQ will enable a portion of Mexican imports from the U.S. to enter Mexico duty free, and then when the quota is reached, any additional imports by Mexico will be subject to a tariff. The quota will be raised each year and the tariff reduced to zero over the phase-in period.

With agricultural and food policies facing increasing pressure for change, Mexico announced PROCAMPO (Programa de Apoyos Directos al Campo) in October 1993. PROCAMPO is a program to decouple Mexican agricultural support by making direct payments per hectare.

Projections indicate that fundamental changes will occur in Mexico's agricultural import demand, export supply, and domestic market structure as a result of the implementation of NAFTA and PROCAMPO. Coarse grain use is expected to be increasingly responsive to growth in feed demand. However, declining producer prices, reflecting the PROCAMPO price reform program, will weaken growth in both acreage and yields. Corn imports are expected to rebound from the relative lows of 1989-93, as price and trade policies become less aggressive in promoting import substitution. For wheat, the impact of strengthening aggregate demand is offset by somewhat higher relative producer prices and continued advances in yields. Soybean imports will continue to grow based on expanding crushing demand and further productivity gains. Soymeal imports are expected to increase, reflecting growth in protein feed requirements. Imports of livestock products (beef, pork, and poultry) will continue to increase, reflecting higher incomes and lower consumer prices.

### Economic Trends and Policies

Since 1987, Mexico has undertaken important policy reforms that include market oriented policies and significant reductions of trade restrictions. The government tightened fiscal and monetary policy, relaxed foreign investment regulations, eliminated foreign exchange controls, and privatized public enterprises. Consistent with domestic policy reforms, Mexico's trade regime has been substantially liberalized. After joining the GATT in 1986, Mexico eliminated the official import and export reference prices, reduced overall tariff rates, eliminated export subsidy programs, and cut the number of items subject to import licensing (1). Since then, Mexico has taken additional steps to liberalize trade. The most significant step to date is NAFTA. NAFTA will have a generally favorable impact on the Mexican economy. Looking outward, the agreement will improve Mexico's access to U.S. and Canadian markets, thereby reducing uncertainty faced by Mexican producers. Looking inward, there will be an increased awareness of opportunities in the Mexican market place which will attract direct investment and help raise incomes.

The Mexican government expects to further consolidate the gains from the opening of the economy through several other trade initiatives. Within the framework of the Latin American Integration Association (LAIA), Mexico signed a free trade agreement with Chile in 1991, with Colombia and Venezuela in 1993, and with Costa Rica in April 1994. Under these agreements, tariffs and other import restrictions for several products will be eliminated by the end of the decade. Currently, negotiations for a free trade agreement with Bolivia are under way.

Real Gross Domestic Product (GDP) growth, which had averaged about 4 percent annually in 1989-91 fell to 2.8 percent in 1992 and slowed further to .4 percent in 1993, far below the official target of 3 percent and the lowest rate since 1986. Prior to 1992, real GDP growth was led by a surge in domestic private investment following deregulation and the opening up of the economy, together with rapid growth in private consumption. The economic slowdown in 1992 and 1993 is associated with the stagnation in aggregate demand resulting from declines in both private investment and consumption not being sufficiently offset by the strong recovery in exports of goods and services.

The Mexican economy is expected to rebound in 1994 as a result of the continuation of the government's structural reforms, fiscal measures to stimulate demand, changes in farm policy, and the impacts of trade liberalization efforts, including the North American Free Trade Agreement (NAFTA). During the 1994-98 period, real GDP growth is assumed to follow a gradual acceleration, with annual rates averaging 4.2 percent. As the recovery accelerates after 1999, the economy is expected to follow a sustained growth pattern with annual rates of 5.5 percent.

#### **Fiscal and Monetary Policy**

The development plan, Pact for Stability, Competitiveness and Employment (PECE), that the Mexican government negotiated with labor and business in December 1987 has been extended through December 1994. Under the program, annual inflation slowed from 27 percent in 1990 to 8 percent in 1993, representing the third straight year of lower inflation (from a record of 159 percent in 1987). Interest rates (as measured by the 28 day CETES rate) have gradually declined as the annual rate fell from an average 44 percent in 1989 to 17 percent in 1993. Throughout the 1990's the real interest rate is expected to decline gradually because of increased availability of credit and capital inflows, and reduced public sector borrowing.

Since 1988, the Mexican government has steadily devalued the peso. The authorities are expected to be more flexible in exchange rate policy in order to maintain export competitiveness. In January 1993, Mexico's currency was replaced by the *nuevo peso*, consistent with the

government's policy of removing three zeros from the exchange rate.

Throughout the 1990's continued restrictive monetary and fiscal policies are expected to help consolidate the stabilization process. Monetary policy will be centered on maintaining high international reserves and a strong capital account surplus. Fiscal policy will seek to obtain greater revenues through tax receipts and the proceeds from the sale of the government agricultural and industrial enterprises and the banks. The renewed 1994 PECE program includes a wage guideline mechanism that links wage increases to productivity to restore the acquisition power of real minimum wages. The government announced fiscal measures to stimulate the economy in 1994 including increased expenditures and reduced taxes. A one-time increase in agricultural transfers to cover the transitional costs of the PROCAMPO program is also likely to boost demand. Gains in private investment are expected, because of more relaxed foreign investment regulations, renewed confidence in the Mexican economy in global capital markets, and repatriation of Mexican capital.

#### **Trade and Trade Policy Developments**

Mexico's balance of payments has been under pressure for several years, in large part because of a long standing policy bias towards import substitution that has inhibited the development of export-competitive industry.

NAFTA implementation should result in strong growth of exports. While a fairly aggressive pace of liberalization of agricultural trade will take place under NAFTA, changes in domestic agricultural and food price and subsidy interventions are expected to be more gradual. Potential adverse effects on agricultural production resulting from the elimination of price supports and the reduction in subsidies, will be partially offset by the new policy of direct payments to farmers through PROCAMPO and the recent reform of the land tenure system.

#### **Agricultural Trends and Policies**

Agriculture generates slightly less than 10 percent of Mexico's gross domestic product (GDP), but employs almost one-fourth of the labor force. Over 3 million people in the agricultural sector earn less than minimum wage, constituting the core of the extremely poor in Mexico. Agriculture in Mexico ranges from a large number of subsistence farmers on smallholdings under the ejido system of land tenure with collective property rights, to large scale capital-intensive producers. Over 48 percent of the agricultural land in Mexico is controlled by the ejido farmers. The grain sector plays an important role in Mexican agriculture and contributes almost half the value of total agricultural production. Corn is the most



important crop in terms of acreage and rural employment. The livestock and horticultural sectors contribute 42 and 8 percent, respectively, of the value of total agricultural output.

Agricultural trade between Mexico and the United States has grown sharply since the early 1980's, increasing from \$3.5 billion in 1980 to \$6.2 billion in 1993, with the value of trade growing at an average annual rate of 4.5 percent during 1980-93 (table 1). The Mexico-U.S. agricultural trade balance has favored the United States for the past 3 years (figure 1). However, Mexican demand for imports slowed in 1993, to \$3.6 billion from \$3.8 billion in 1992, representing a 5 percent reduction. Increased Mexican production and a slowdown in Mexico's economic activity were the main reasons for the trade decline in 1993. Imports of livestock and products, which in the past had increased from less than \$300 million in 1980 to over \$1.3 billion in 1992, were slowed in 1993 as a result of new tariffs levied on the c.i.f. value of livestock and products. With the expected improvement in the Mexican economy in 1994 and the start of NAFTA, the value of Mexico's agricultural imports from the United States is forecast to be a record \$3.9 billion.

Mexican agricultural exports to the United States in 1993 were \$2.7 billion, a 14 percent increase from 1992. Tomatoes and other winter vegetables traditionally exported to the U.S. accounted for over two-thirds of the increased trade, reflecting poor weather in the United States in 1993. In 1993, Mexico was also an important source for U.S. imports of coffee, cattle, and processed foods, including tomato paste.

With implementation of NAFTA, the bilateral arrangements between Mexico and the United States and Mexico and Canada have removed or phased out tariffs on a broad range of agricultural products. Under NAFTA Mexico is permitting duty-free access to a portion of the market for certain highly sensitive commodities, including corn and dry beans. The import licensing restrictions have been replaced with either tariff-rate quotas or ordinary tariffs to be phased out within 5-15 years, depending on the product. During the transition period, each country may adopt special safeguard measures in the form of tariff quotas for certain products.

For non-NAFTA countries, import tariffs are levied on the c.i.f. value of most products imported into Mexico. In addition, import licensing, via prior import permits, and quantitative controls on competing imports are still in place for several agricultural products. Currently applied tariff rates on imported agricultural commodities range up to 20 percent of the c.i.f. value of the item, but tariff bindings for several agricultural products are set at the GATT maximum of 50 percent. Also, a system of tariff escalation by degree of processing is in place.

Agricultural policies and, more fundamentally, policy goals, have changed dramatically in Mexico over the past 3 years. For more than 40 years policies to promote import substitution in industry were complemented with agricultural policies that included high tariffs, import licensing, and official import reference prices for agricultural goods. These measures were accompanied by domestic subsidies and the establishment of public enterprises that provided additional support to the farm sector.

Since 1987, Mexico has substantially reduced price supports, inputs assistance and consumer subsidies, and reformed the land tenure system. Fiscal transfers to agriculture have been reduced by restructuring and privatizing various public sector agricultural enterprises. Consistent with domestic policy reforms, Mexico's trade regime has been substantially liberalized. The most significant step to date is NAFTA, which sets a maximum of 15 years to phase out barriers to agricultural trade.

The policy of less government intervention and deregulation of the domestic market was given added emphasis in December 1991 when the Mexican government initiated a dramatic program of reform of the ejido system of agrarian land-holding. The constitutional reform was intended to strengthen property rights under the ejido system by allowing farmers to receive title to their land, permitting owners to rent or sell their land. In addition, the new regulations permit the operation of joint stock companies through which the holdings of various individuals can be pulled together to exploit economies of scale, and allow joint operations between private and ejido agriculture to encourage greater agricultural productivity.

Mexico's domestic and trade policy reforms are making the country's farm sector more market-oriented. PROCAMPO is in itself a transition policy, so that producers can adjust gradually to the structural changes induced by trade liberalization. (See Box on PROCAMPO Program). Together, NAFTA and PROCAMPO will alter the structure of Mexican agriculture by providing incentives for Mexico's production of high valued farm products (including fruits, vegetables, and livestock products), and lowering domestic prices of other crops, reversing past policies aimed at stimulating the production of basic food crops, sometimes at the expense of export crops.

### **Producer Price Policy**

PROCAMPO replaces the traditional price support system based on high guaranteed and agreed-upon minimum prices, which generally exceeded the world market price. PROCAMPO is a program to decouple Mexican agricultural support by making direct payments per hectare planted of corn, beans, wheat, rice, cotton, soybeans,

safflower, barley, sorghum, and coffee. The payment rate will be based on fixed average yields. Payments rates per hectare will be held constant in real terms for a period of 10 years, and will be phased out in equal installments from year 11 to year 15. The program lowers guarantee prices faster than previously anticipated under NAFTA.

### **Consumer Price Policy**

Mexico has pursued the goal of low-cost food for consumers using marketing and processing subsidies and price controls at the consumer level. The government also owns and operates processing plants and a network for distribution and retail sales. Consistent with current reforms, Mexico has taken important measures to encourage less government involvement. One major change is a reduced role for the agricultural State-trading agency, Compañía Nacional de Subsistencias Populares (CONASUPO), in domestic distribution, marketing, and processing of grain and oilseed products. With the 1990 deregulation of distribution and sale of corn products, CONASUPO now owns fewer processing plants and retail outlets. Another key reform, enacted in March 1994, was the elimination of retail price controls for all commodities other than corn for tortillas and milk. This measure eliminated long standing controls on retail prices of almost all basic foods, including wheat products, rice, beans, vegetable fats and oils, butter, eggs, poultry, and pork.

As part of the government's nutrition policies, CONASUPO's targeted program to subsidize the price of corn tortillas for low-income consumers has been in effect since 1986. The tortibonos program (Programa de Distribución de Cupones de Tortilla Subsidiada), the most costly in terms of fiscal subsidies, provides corn tortillas at preferential prices to about 5 million people through CONASUPO-owned retail outlets (DICONSA, Distribuidora Conasupo, S.A.) in low-income urban neighborhoods. In addition, under a program initiated in 1990, Programa de Subsidio al Consumo de Tortilla, the government provides stamps to obtain 1 kilo of free tortillas per day for 2.7 million low-income households. The free tortillas represent about one-half the daily average household consumption, effectively providing a 50 percent subsidy rate to about half of Mexico's population. A subsidy for milk consumption that benefits 7 million children is being provided through CONASUPO's dairy products affiliate, LICONSA.

### **Input Subsidies**

As part of the reform process and because of budget constraints, agricultural input subsidies are being generally reduced. Production inputs that are still being provided at below market prices to low-income producers include credit, crop insurance, fertilizer, pesticides, improved seeds, irrigation water, and electricity. Producers of basic

products (grains, oilseeds, eggs, meat, fruit, vegetables, and fodder), as well as producers of processed and exportable agricultural and livestock products receive credit from Fideicomisos Instituidos en Relación a la Agricultura (FIRA). Agricultural credit is also granted by the credit institution BANRURAL. Interest rates on loans to farmers have been significantly below commercial lending rates. Financial institutions set different rates according to income (credit institutions recognize different income groups--low, middle, and high-income producers), and product. Subsidized credit for agriculture, sharply cut in 1987, has been gradually phased out and targeted to low-income producers only. The National Crop and Livestock Insurance Company provides agricultural insurance at premiums below market rates.

Mexico also provides irrigation and electricity subsidies. Mexican subsidies for irrigation originate in subsidies on water provided through surface irrigation systems. As part of reducing agricultural subsidies, irrigation facilities have been privatized and the contribution of users to operational cost recovery has been significantly increased. The electricity subsidy, which represented over 80 percent of the electricity cost for pumping ground water, was eliminated in 1990. Elimination of the subsidy represents an effective increase of 150 percent on the price of electricity for agricultural irrigation.

Traditionally, subsidies to Mexican cattle producers and beef processors have been lower than to crop producers. Subsidies available to livestock producers include the CONASUPO's feed grains subsidy and animal health programs. The Mexican government, through CONASUPO, sells feed grains and soy meal to livestock producers at below purchase price and absorbs the marketing costs. The government also provides free assistance to control and eradicate animal pests and diseases.

### **Effects of PROCAMPO on Corn Production**

It is clear that implementing NAFTA will result in changes in Mexico's agricultural import demand, export supply, and domestic market structure. But the nature and extent of domestic agricultural policy reform under PROCAMPO will also be very important in assessing outcomes in the Mexican agricultural sector, since domestic pricing and subsidy issues are not explicitly part of NAFTA.

The PROCAMPO reform plan is projected to lead to lower producer and consumer prices for all program crops. The guaranteed corn price is probably the single most important policy instrument in determining trends in the Mexican agricultural economy. Corn accounts for close to half of Mexico's total cropland and is the principal crop of over 2.4 million farmers (46 percent of all agricultural



producers). It is grown in all 33 Mexican States on farms ranging from small subsistence plots in the Southeast to large commercial farms in the Central and Northwest regions. About two-thirds of the corn area is farmed under the ejido system of land tenure (collective farming) and almost 90 percent of corn producers in this system cultivate subsistence farms--5 or less hectares. Over 85 percent of harvested corn area is rain-fed, but corn is grown on almost a quarter of all irrigated cropland. About 61 percent of the corn production from irrigated land is produced by large, commercial farmers. Subsistence farmers grow over 65 percent of the corn harvested from rain-fed land.

Corn area and production showed little change in trend during the latter half of the 1980's. However, a sharp increase in the relative price of corn starting in 1989 encouraged a rise in both irrigated and rain-fed area planted to corn. Production on rain-fed land increased over 20 percent between 1989 and 1991, to 9.9 million tons, and was up nearly 60 percent on irrigated land, to 4.3 million tons as a result of increased area and 3 years of good weather.

About 34 percent of corn output is typically consumed on-farm. Ejidatario farms of 5 hectares or less consume about 60 percent of their output and market the rest. Commercial farmers, on the other hand, market most of their output (2). The cropping pattern should change fairly rapidly in response to PROCAMPO price and subsidy reforms, while the crop mix of subsistence farms is likely to remain more or less unchanged.

It is expected that the decline in the guaranteed corn price will be steeper than for other commodity prices over PROCAMPO's 15-year phase-in period. This would lead to a decrease in both irrigated and rainfed area planted to corn. Subsistence producers would reduce area planted, but since PROCAMPO's direct income support payments are targeted to subsistence producers, commercial producers' planted area would decline more rapidly.

The total estimated reduction in planted corn area, about 700,000 hectares, will affect an estimated 215,000 corn producers, who will need to switch to production of other commodities during the plan's first 3 years, when domestic prices will equal international prices. Corn area is estimated to be reduced by over 1.4 million hectares by the end of the 15-year transition period.

The number of corn producers who will switch to other agricultural activities depends on the specific assumptions about increases in labor productivity and growth in the average farm size over time. Virtually all the commercial farmers moving out of corn production--located mainly in the irrigated areas in Tamaulipas, Chihuahua, Sonora, Sinaloa, and the Bajío--will likely move into wheat,

soybeans, sorghum, cotton, horticultural, sugarcane, and other crops, based on relative expected returns. As fewer producers grow corn and certain other commodities under the PROCAMPO plan, Mexican imports of these commodities are expected to rise.

## **Agricultural and Trade Prospects**

Mexico has begun implementing regulatory changes to conform with NAFTA. The changes include publication of the new tariff schedule compatible with the NAFTA treaty and guidelines to administer the TRQ for all products under licensing prior to the agreement. In March 1994, Mexico announced an auction procedure for the TRQ for eggs imported from the United States. The auctions for Quota Certificates will be administered by SECOFI, the Ministry of Foreign Trade. Other commodities (corn, beans, powder milk, poultry) will receive individual allocations based on a system of direct assignment, sealed bids and special provisions.

Agricultural trade between Mexico and the United States has grown rapidly, increasing from \$1.9 billion in the first quarter of 1993 to over \$2.1 billion in the first quarter of 1994. The value of Mexico's agricultural imports from the United States exceeded \$1.1 billion, 15 percent higher in the first three months of 1994 over a year earlier. Major imported commodities were meats, poultry and dairy products, feed grains, vegetables and preparations and fruit and preparations. Mexican agricultural exports to the United States grew 12 percent in the first quarter of 1994 compared to the same period a year earlier, rising to over \$1 billion. Agricultural exports to the United States consisted primarily of vegetables but also include tomatoes, coffee, bananas, fresh fruits, and cattle.

Immediate elimination of import tariffs on cattle (15 percent) and beef (20 percent on fresh beef and 25 percent on frozen beef), will favor immediate import expansion. Mexican imports of livestock and livestock products, including cattle and calf purchases, are forecast up in 1994 reflecting freer trade, rising incomes, and increased availability of U.S. export credit guarantees (3). In the longer term, during the NAFTA transition period, feeder cattle exports from Mexico to the United States are projected to expand steadily. Initially, cattle exports will decline because of relatively high GDP growth rates and lower consumer beef prices on slaughter demand. In the longer term, feeder cattle exports are projected higher because lower assumed GDP growth rates and the increasing influence of relatively high border prices slow growth in beef demand.

Mexican beef imports from the United States are expected to more than double, rising steadily from around 100,000 tons in 1993 to 287,000 tons by 2005. Beef production in Mexico grows at 3.4 percent annually, while demand

expands at a 3.7 percent annual rate. Assumed declines in domestic feed prices are insufficient to stimulate stronger growth in domestic production and slow import demand. Beef is the traditional meat among Mexican consumers. Current per capita consumption of beef in Mexico is 44 pounds, although it still remains low compared to the U.S. at 97 pounds. Growth in Mexican consumer incomes and population growth are fueling growth in beef demand.

The outlook for both hogs and pork calls for increases in the volume and value of Mexican imports from 1993. In the past, Mexican pork producers were protected by high tariffs of 20 percent on pork and slaughter hogs. Under NAFTA, Mexico instituted tariff rate quotas for U.S. slaughter swine, pork, and ham. Tariff rate quotas have initial tariffs of 18 percent on within-quota imports and 20 percent on above-quota amounts. The within-quota tariffs are to be phased out gradually over 10 years. The over-quota tariffs will remain at 20 percent and then be eliminated at the end of year 9. The quotas will grow at a 3-percent annual rate.

In 1994, Mexico will continue to be the largest buyer of U.S. hogs and account for a significant share of U.S. pork exports. Relatively strong GDP growth boosts pork demand and hog slaughter. After 1994, slower growth in demand and the increasing influence of relatively high border prices on domestic prices will likely slow hog imports.

Mexican pork imports from the United States, primarily higher-priced cuts, are expected to grow from 50,000 tons in 1993 to about 122,000 in 2005, driven by income growth. Pork output in Mexico is projected to increase at 2.7 percent annually, while demand expands at 2.8 percent. As in the case of beef, assumed declines in domestic feed prices are insufficient to stimulate stronger growth in domestic production and slow import demand. Per capita pork consumption in Mexico lags behind both beef and poultry at 23 pounds (compared to 69 pounds in the United States).

Mexican imports of poultry meat from the United States, up sharply in recent years, are also expected to grow further in 1994 as demand for and consumption of poultry meat continues to increase even faster. Under NAFTA, Mexico eliminated its licenses and the 10 percent tariff on imports of poultry. NAFTA converted the import licensing restrictions to tariff rate quotas. The tariff rate quotas on poultry meat products will total 95,000 tons in the first year of the agreement, growing by 3 percent annually, with zero duty. The over-quota tariffs, ranging from 133 percent to 260 percent, will decline by 24 percent in the first 6 years and go to zero by year 10.

Mexican poultry imports are expected to rise to about 202,000 tons in 2005 when the agreement is fully

implemented, driven primarily by rising incomes. Poultry production in Mexico increases at 4.7 percent annually, and consumption demand expands at 4.6 percent per year, with income growth and lower prices of poultry relative to beef being the primary determinants of growth. Mexican per capita consumption of poultry is around 26 pounds per year (compared with 76 pounds in the United States), but has increased significantly in recent years, having doubled in just 4 years.

Another commodity forecast to increase sales in 1994 is corn, as NAFTA eliminates the Mexican import license and gives the United States duty-free access for 2.5 million metric tons annually, boosting U.S. corn exports to Mexico in 1994. Under NAFTA, the minimum access will grow by 3 percent each year over the 15-year duration. Quantities above the duty-free access level will have a high initial tariff of 215 percent, which will be gradually reduced by 24 percent in the first 6 years, then reduced to zero in the following 9 years. It is expected that at least half of the imported corn will go to satisfy feed demand, benefiting Mexican livestock and poultry producers.

As a result of NAFTA, corn imports should expand rapidly, rising from 1.5 million tons in 1993 to about 6 million in 2005. Production growth is slowed during 2000-2005 because of a relatively fast decline in producer prices during that period. Total food use of corn increases at an annual rate of 1.9 percent. Feed use of corn expands 3.5 percent annually, but still remains small due to higher prices relative to sorghum. Feed demand is a function of income and the prices of corn and sorghum, and relatively high domestic corn prices relative to other feeds continue to limit growth.

Although U.S. exports of sorghum to Mexico will benefit from the immediate elimination of the seasonal (May 16-December 15) 15-percent ad valorem tariff, sales of U.S. sorghum to Mexico are expected to be hampered by the increased sales of corn for feeding (3). The final outcome is highly dependent on the amount of corn used for feed, which is influenced by the relative prices of corn, sorghum, wheat, and barley.

Under NAFTA, Mexican imports of sorghum increase steadily from 2.9 million tons in 1993 to 5.1 million tons in 2005. Production expands at 7.3 percent annually, based on annual growth of 7.1 percent in area and .2 percent in yield. Sorghum demand expands at 3.8 percent annually, driven by rising feed requirements.

Under NAFTA, Mexico's imports of other coarse grains more than double from .1 million tons in 1993 to .25 million in 2005. Production increases at 3.6 percent annually, based on 3.4 percent annual growth in area and .1 percent in yield. Demand for other coarse grains,



primarily barley, grows at an annual rate of 3.8 percent, driven by rising incomes and declining consumer prices.

Mexico's imports of soybeans from the United States are expected to show further gains in 1994. NAFTA will immediately reduce the 15 percent tariff back to the standstill base of 10 percent, reduce the dutiable season, and then reduce the tariff to zero over 10 years. Mexico has a 15 percent tariff on soybean meal, a 10 percent duty on crude soybean oil, and a 20 percent duty on refined soybean oil. All these duties will be phased out over 10 years. U.S. soymeal sales to Mexico are also expected to rise, reflecting increasing protein feed requirements and the expansion in the Mexican poultry sector.

Under NAFTA, Mexican imports of soybeans to meet crushing demand increase from 2.1 million tons in 1993 to 4.3 million in 2005. Imports of beans are driven primarily by lower international prices compared to the domestic product, excess processing capacity, and expansion in the Mexican poultry sector. Soymeal import demand is expected to grow at an annual rate of 5.2 percent during 1993-2005. Soybean production, primarily irrigated, expands 6.6 percent annually, driven largely by higher domestic prices relative to wheat. Meal demand rises 4.6 percent annually, reflecting increasing protein feed requirements and lower domestic prices.

For wheat, the U.S. share is declining because Canadian suppliers have been increasing their share of the market. However, the volume of wheat sales to Mexico is estimated to rise in 1994 to meet expanding demand. Under NAFTA, Mexico will eliminate its licenses for all wheat immediately and apply a common tariff of 15 percent which will be reduced to zero over a 10-year transition period.

Under NAFTA, Mexican imports of wheat increase from a high 1.7 million tons in 1993 to 1.9 million in 2005. Production increases at 5.5 percent annually, based on 4.5 percent annual growth in area and 1 percent in yield.

Declining producer prices weaken growth in both area and yields, while gains in irrigated areas favor wheat production. Wheat demand grows at an annual rate of 4.6 percent, driven by rising incomes and declining consumer prices.

Mexican imports of deciduous fruit, apples, pears, peaches, and nectarines, among others, from the United States are expected to show further gains in 1994, reflecting reductions in Mexico's tariffs and increased demand for higher quality and variety of deciduous fruit.

In the short term, producer incentives are expected to quickly shift land and technology away from corn and into other crops. This would result in lower corn production and higher imports. The impact in other crop markets may be the reverse--higher production and lower imports. These results imply that the number of corn producers in Mexico contract sharply with trade and policy reform, although relaxing constraints on access to capital and credit will enhance their ability to intensify production or to shift to other higher-value crops. These smallholders will probably switch to extensive livestock operations since other forms of diversification (fruits and vegetables) are more demanding in terms of credit, irrigation, management, commercialization, post-harvest value added, and new technologies. In the long run, the closer Mexican support prices are to world prices, the greater the increase in imports of major grains and oilseeds. These conclusions also suggest that consumers of major grains will be able to consume more at lower prices.

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Table 6.1  
Agricultural imports from the United States

Commodity	1980	1985	1990	1991	1992	1993
----- Million dollars -----						
Agricultural imports	2,490	1,439	2,553	2,998	3,791	3,603
Com	678	199	401	148	129	35
Wheat 1/	123	1	56	52	81	143
Rice	20	0	39	25	44	56
Pulses	221	17	104	24	16	15
Sorghum	319	214	328	373	548	366
Barley	38	1	27	7	12	12
Soybean	259	229	203	344	440	416
Soybean Meal	48	17	58	66	100	41
Vegetable Oils	47	60	38	60	93	119
Non-citrus fruits	2	3	29	44	61	96
Beef	2	4	80	185	208	112
Pork	9	9	37	68	77	59
Poultry meats	13	14	57	116	169	205
Dairy Products	71	62	60	121	160	247

1/ Includes wheat flour.

Source: FATUS, U.S. Department of Agriculture.

Table 6.2  
Summary of grain projections under PROCAMPO and NAFTA

Commodity/ Item	1993	2000	2005	Annual rate of change			
				1970-80	1980-90	1990-00	2000-05
	----- Units -----			-----percent-----			
Wheat							
Area (Mil.ha)	0.71	1.03	1.26	-0.1	2.3	0.8	4.2
Yield (Tons/ha)	4.20	4.75	4.99	2.9	1.4	1.5	1.0
Production (Mil. tons)	3.00	4.88	6.31	2.8	3.8	2.3	5.3
Net imports (Mil. tons)	1.70	1.76	1.88	21.2	-7.3	15.9	1.3
Consumption (Mil. tons)	4.72	6.61	8.16	5.6	1.7	4.2	4.3
Feed (Mil. tons)	0.60	0.48	0.58	16.0	2.6	-2.3	3.9
Corn							
Area (Mil.ha)	8.00	7.06	6.41	0.3	-1.7	0.7	-1.2
Yield (Tons/ha)	2.13	2.06	2.32	2.5	3.6	-0.4	2.4
Production (Mil. tons)	17.00	14.51	15.41	2.7	1.8	0.3	1.2
Net imports (Mil. tons)	1.50	4.54	5.96	24.1	-0.4	9.7	5.6
Consumption (Mil. tons)	19.10	19.03	21.35	4.7	1.5	2.3	2.3
Feed use (Mil. tons)	5.50	3.24	3.90	22.4	4.8	6.7	3.8
Sorghum							
Area (Mil. ha)	0.60	1.19	1.55	2.2	0.1	-0.9	5.5
Yield (Tons/ha)	3.40	3.26	3.30	1.5	0.4	1.4	0.3
Production (Mil. tons)	2.04	3.86	5.11	3.8	0.3	0.4	5.8
Net imports (Mil. tons)	2.90	4.77	5.12	47.5	5.6	4.7	1.4
feed use (Mil. tons)	5.14	8.59	10.19	9.3	2.3	2.4	3.5



Table 6.3  
Economic growth rates in Mexico

Item	1970's	1980's	1989	1990	1991	1992	1993 <sup>1</sup>	1994 <sup>2</sup>
	----- percent/year -----							
Gross domestic product	6.1	1.4	3.3	4.5	3.6	2.8	0.4	2.4
Private investment	10.0	-1.2	5.0	10.3	11.6	13.3	-1.3	7.0
Inflation	16.0	70.0	19.7	29.9	18.8	11.9	8.0	7.9
Interest rate	14.8	55.8	40.6	26.0	16.7	16.9	11.0	10.5
Depreciation of the real exchange rate	2.7	-5.6	1.1	5.9	9.2	8.6	7.8	--

Note: -- denotes not available.

<sup>1</sup> Preliminary.

<sup>2</sup> Estimated.

Source: Mexican authorities and ERS estimates.

## Agricultural Trade and Integration in the Western Hemisphere: Current Status

***World markets are being redefined by the tendency toward trade liberalization as seen with GATT and NAFTA. Compounding this movement has been the opening up of domestic economic policies of many countries. The Western Hemisphere (WH) encompassing the United States, Canada, and Latin America and the Caribbean (LAC) is emerging as one of the major regional trading blocks. [Constanza M. Valdes and John Link]***

The WH is one of the largest regional markets, with a combined GDP of \$7.2 trillion representing 31 percent of global wealth and 740 million consumers, representing 14 percent of the world's population. Latin America alone has a population of 449 million and a GDP of over \$1 trillion. Negotiations leading to WH trade liberalization are aimed at creating a free trade zone with reduced or eliminated tariff and non-tariff barriers. Already, intra-American trade is significant, totaling about \$720 billion in 1992 or about 40 percent of world trade.

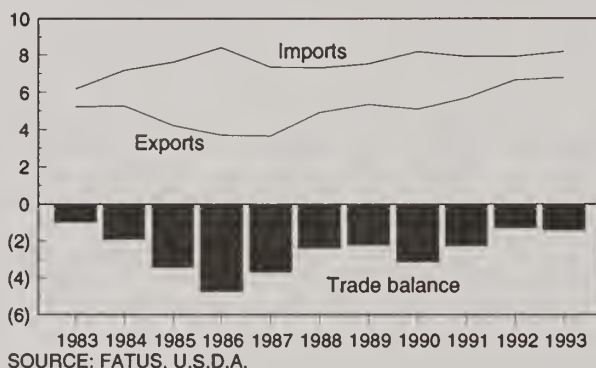
The InterAmerican Development Bank has projected trade within the hemisphere to grow 4.2 percent annually, in real terms, over the next decade. Agricultural trade between the United States and the other Western Hemisphere countries is also significant, at \$24.9 billion in 1993, representing close to 37 percent of total U.S. agricultural trade. The United States and the rest of the Western Hemisphere each represents over one quarter of the other's export market and about half of the other's import supply. U.S. agricultural exports to the hemisphere are growing faster than exports to the rest of the world. After Asia, LAC is the largest market for U.S. farm exports, and is the main source of U.S. agricultural imports (figure1).

WH economic integration is proceeding at a rapid pace. The U.S.-Canada Free Trade Agreement (CFTA) enacted in 1989, was expanded by NAFTA to include Mexico. More dramatic than these U.S. initiatives is the pace of sub-regionalization within LAC, numerous trade accords have been signed and more are under discussion. Many countries view sub-regional integration as a preparatory step towards global competition, and essential to overcoming constraints posed by small domestic markets by allowing firms to realize the scale economies of expanded markets.

The United States has supported subregionalization and has expressed a clear preference for negotiating trade agreements multilaterally with groups of countries. The United States has shown its willingness to negotiate bilaterally, signing framework agreements with numerous countries (Bolivia, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Venezuela, and Peru). A U.S.-MERCOSUR framework agreement was signed in 1991, and other multilateral agreements are being discussed with the Caribbean Community and Guatemala, Nicaragua, and Panama.

Sub-regional trade liberalization is being accompanied by market-oriented reforms in almost every LAC country in an effort to improve competitiveness, attract investment, and restore growth. While domestic growth is very slow in some countries, many reforms take time and in an increasing number of countries recovery is underway. Capital is returning to LAC, attracted by changes in investment rules, more stable political and economic situations, and sounder policies. LAC exports are expanding, but imports are growing even faster and will accelerate as integration progresses. From 1989 to 1990, capital inflows increased from \$4 billion to \$14 billion. Estimates indicate that real growth could average 4.5 percent annually for LAC in the 1990's, if current reforms continue. This implies that LAC's demand for agricultural products could grow rapidly, perhaps faster than the sub-region can supply.

Figure 7.1  
**U.S. Agricultural Trade with LAC 1983-93**  
US\$ Billion





## Patterns of Trade for Agricultural Products in the Western Hemisphere

The United States and the rest of the WH are major agricultural net exporters, exporting almost twice as much as they import in value terms. The United States and the rest of the WH both ship over one-quarter of their exports to each other and obtain almost half of their agricultural imports from each other.

The largest WH agricultural trading partners for the United States are Canada and Mexico. The United States currently ships more than one-quarter of the value of its agricultural exports, \$12 billion in 1993, to WH countries. U.S. agricultural exports to consist of feed grains, wheat, pulses, oilseeds and products, sugar, seeds, deciduous fruits, cattle, beef and veal, pork, poultry, and dairy products. The United States is also an important source for WH imports of processed foods, including tomato paste, and of beverages, such as fruit juices and beer. U.S. exports to the WH grew an average of 16 percent annually during the 1970's, this slowed to 4 percent during the 1980's. Growth was strongest in animal products, followed by vegetables and fruits (figures 2-4.)

The United States also currently receives over half of its agricultural imports, \$13 billion in 1993, from WH countries. Major imported commodities include horticultural and tropical products, coffee, cut flowers, bananas, cattle, and fresh noncitrus fruits. U.S. imports from the Hemisphere grew an average of 11 percent annually in the 1970's, this slowed to 4 percent annually during the 1980's. Recent growth was strongest in cattle, fruits, grains, vegetables, and bananas. U.S. coffee and sugar import values appear to be declining. In 1993, U.S. agricultural exports to all destinations, valued at \$43 billion, were almost equal to those by the other WH countries to all destinations, \$44 billion. Total 1993 U.S. agricultural imports of \$25 billion were also comparable to those by the remaining WH countries, \$24 billion. Over half of total agricultural imports by other WH countries

were from the United States in 1993. The United States was the destination for over one-quarter of agricultural exports by other WH countries in 1993.

The trends in U.S. exports are partly obscured by cyclical peaks, but those to WH countries are growing more than to the rest of the world. The commodities for which trade is increasing are often ones that both the United States and other WH countries export, for example, meats, fruits, and vegetables. Between 1979-1981 and 1990-1992, competitive imports (commodities that the United States also produces) from the Hemisphere grew by 7 percent annually, while total imports from the Hemisphere grew only 3 percent annually. The United States has been increasing its proportion of exports of high-value agricultural products.

Measured by the value of agricultural trade, the United States generally runs a trade surplus with respect to NAFTA and a deficit with MERCOSUR, the Andean Group, and the rest of the hemisphere. The NAFTA partners (Canada and Mexico) account for the largest share of U.S. exports in the WH. The Andean Group and the rest of the WH (Central America, Caribbean, and some countries of South America) also import substantial quantities of grains and feeds. NAFTA countries are also the United States' largest suppliers in the hemisphere, providing animals and animal products, vegetables, and some tropical products, among other goods. The Andean Group exports bananas, coffee, and cut flowers to the United States. The rest-of-Hemisphere category is notable for the amount of bananas, other fruits, coffee, and sugar and products exported to the United States. MERCOSUR ships coffee, cocoa, beef and veal, fruit juices, and unmanufactured tobacco to the United States.

Intra-regional trade, which accounted for only about 8 percent of total exports by CACM members in 1960, reached 25 percent in 1970 and remained there until 1980. This large expansion in trade was due to trade diversion caused by preferential tariffs, rather than trade creation.

Figure 7.2

### U.S. Exports to Latin America

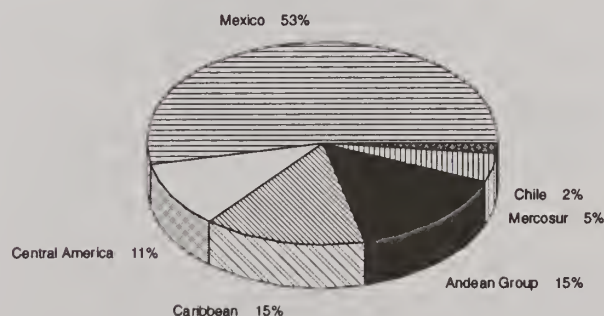


Figure 7.3

### U.S. Imports from Latin America

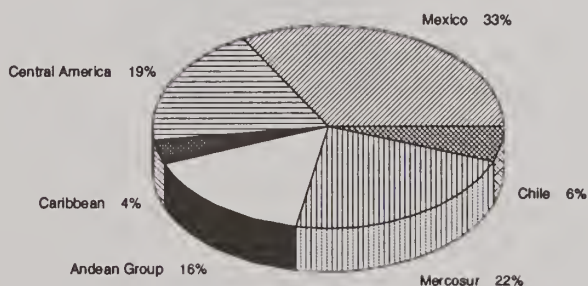


Figure 7.4

## Composition of U.S. Exports to Latin America, 1993

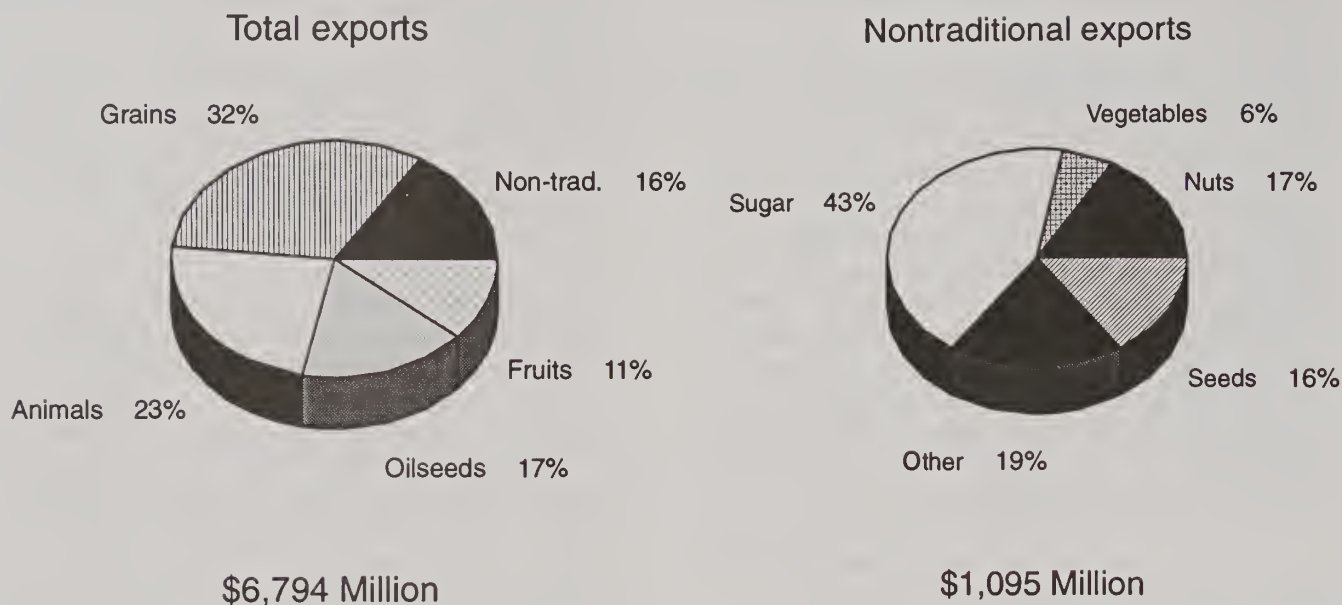
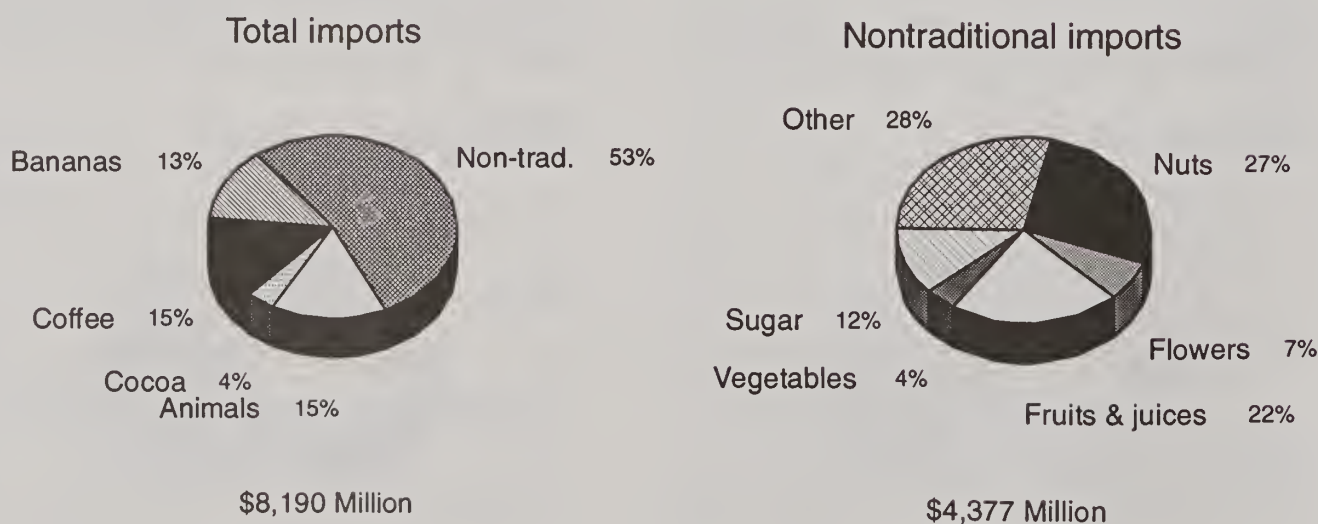


Figure 7.5

## Composition of U.S Imports from Latin America, 1993





## **Economic Integration, Preferential Markets, and Bilateral Agreements in the WH**

Trade initiatives in the WH that involve the United States are: NAFTA, the Enterprise for the Americas Initiative (EAI), the Caribbean Basin Initiative (CBI), and the Andean Trade Preference Act (ATPA). Several other integration initiatives include agreements between groupings of countries and bilateral arrangements.

Under the NAFTA agreement, the bilateral arrangements between Mexico and the United States and Mexico and Canada have removed or phased out tariffs on a broad range of agricultural products. Also, each country is permitting duty-free access to a portion of the market for certain highly sensitive commodities, including corn, dry beans, and poultry in Mexico; and fruits and vegetables in the United States. Under NAFTA, the import licensing restrictions have been replaced with either tariff-rate quotas or ordinary tariffs to be phased out within 5-15 years, depending on the product. During the transition period, each country may adopt or maintain special safeguard measures in the form of tariff quotas for certain products.

The EAI, an economic initiative announced in June 1990 by the U.S., is intended to encourage trade liberalization, reduce developing country debt, and increase foreign investment in developing countries. The trade proposal supports a Hemisphere-wide free trade zone. The relative size of the Latin American market is suggested by a population of about 440 million, and aggregate GDP of over \$1.0 trillion.

The United States implemented two trade preference programs for the Latin American region. The first, CBI, was started in 1984 for 24 countries of the Caribbean and Central America regions. The second preference program, the ATPA, was authorized in 1991 to help fight drug production in Latin America by increasing output of other crops. It was implemented in July 1992 for Bolivia and Colombia, and in August 1993 for Peru, but has not yet been implemented for Ecuador. The ATPA expires in 2001.

There are several other regional trading blocks not associated with the United States. The Canada-Caribbean Commonwealth program (CARIBCAN), is maintained by Canada to provide duty-free access for commodities produced in 19 Commonwealth countries and territories. The Caribbean Community and Common Market (CARICOM), which consists of Caribbean countries formerly under British rule. The target date for a CARICOM single market is 1994. The region plans to reduce the common external tariff from a 45 percent to 20 percent by 1998. In 1993, CARICOM and Venezuela signed a one-way free trade agreement, which permits the

free importation of some CARICOM products into Venezuela, while other commodities are receiving gradual tariff reductions to be eliminated by 1996. Venezuelan goods, on the other hand, are receiving most favored nation (MFN) status in the CARICOM market.

Economic integration of several countries is not a new concept in Latin America. For more than 40 years, as Latin America became increasingly aware that the creation of a common market was essential to economic development, the LAC countries attempted at various times to form an economic block either as a region or with the rest of the Western Hemisphere. The countries of Greater Colombia--Ecuador, Colombia, and Venezuela--implemented a customs union; Argentina signed trade treaties with Chile, Paraguay, Bolivia, and Peru; and the countries of Central America have negotiated several bilateral trade agreements. Although most of these arrangements have been short-lived, they have served as precedents for later economic integration proposals.

Within the past decade, Latin America has developed a substantial number of regional trade blocks, which promise various benefits. Some of the most significant subregional agreements in Latin America, in addition to CARICOM, include the Latin American Integration Association (ALADI), the Andean Group (also known as the Andean Pact), the Central American Common Market (CACM), the Common Market of the South (MERCOSUR), and the recently announced Group of Three (G3).

The Latin American Integration Association, ALADI, also known as the Montevideo Treaty includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela. Formerly the Latin American Free Trade Association (LAFTA, 1961), ALADI was established in 1980 to promote freer regional trade with preferential tariffs. Although the ALADI's regulatory and institutional framework has facilitated subregional (e.g., the Andean Pact, MERCOSUR, G3) and bilateral (e.g., Mexico-Chile) agreements; successive conflicts between regional and country priorities have hampered global integration within the region.

The Andean Pact (initially Colombia, Venezuela, Bolivia, Ecuador, and Peru) or Cartagena Agreement was formed in 1969. Due to political and economic problems, no significant progress was achieved, until its revival in the early 1990's. In 1993, the average external import tariff of all Andean Pact country members, including Peru, had been reduced by two-thirds to 13.6 percent (from a record 41 percent in 1990). As a result, Andean Group annual trade in 1992 increased by 18 percent, to US\$2.1 billion, the largest increase since the group was formed in 1969 (1). Current discussions for the revival of the Andean Pact center around the establishment of a common external

tariff, tariff reductions, harmonization of the price band system and import policy among member countries, and the issue of Peru's reintegration into the Andean Pact, which it abandoned in 1992.

The Central American Common Market, CACM (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) has set regional tariff preferences that range from 5 to 20 percent, with a 15 percent common external average tariff. A free trade agreement was signed by El Salvador, Guatemala, and Honduras in 1992 (the Northern Commercial Triangle, Triángulo Comercial del Norte), but has yet to be implemented. Nicaragua and Costa Rica are expected to join this year. Central America, Venezuela, and Colombia signed a free trade agreement in February 1993, giving many Central American products free access to the Venezuelan-Colombian market by 1996, and complete access by 1999. Venezuela and Colombia will receive the same duty free access to the Central American markets in 5 to 10 years, depending on the product.

The complementary economic agreement signed by Argentina and Brazil in July 1986, was expanded to include Paraguay and Uruguay, resulting in The Common Market of the South, MERCOSUR. This trade accord was signed in March 1991 and enacted in November of the same year, with a 1995 target for a customs union and free trade. The largest regional trade agreement in Latin America, MERCOSUR covers over two thirds of the regional area, involves 44 percent of the region's population and contributes with 51 percent of Latin America's GDP. Since the establishment of MERCOSUR, trade among member countries has increased to more than \$9 billion, including a 25 percent increase in 1993.

The G3 (Mexico, Colombia, and Venezuela) finalized negotiations for a trade agreement December 2, 1993, and it is expected that the implementation of the G3 could begin in 1995. Initially established as a mechanism for policy coordination, the three countries agreed to phase-out tariffs for 60 percent of traded agricultural products within 10 years. The more sensitive goods are being excluded from the agreement. Although scheduled to be signed January 20, 1994, the G3 has been experiencing some difficulties. The members have not yet agreed on the stand-still tariff rate and the tariff reduction schedule for selected agricultural commodities under the ALADI framework. The G3 is also negotiating separate trade agreements with Central America and CARICOM.

Several bilateral agreements have been signed, and more are under discussion. Bilateral trade accords country to country or within groupings of countries include different forms of the integration: the wider free trade agreements (Colombia-Venezuela, 1992); friendship treaties for trade cooperation (Chile-Argentina, 1984); sectoral agreements that make special reference to certain services (Mexico-

Brazil, 1990); framework agreements; and the most common, the complementary economic agreements (CEA). Some bilateral agreements also include provisions on reciprocal investment and for industrial cooperation (Argentina-Bolivia, 1989).

Mexico grants tariff preferences to member countries of ALADI and some Central American countries. The regional tariff preference ranges from 14 to 48 percent, depending on the beneficiary country. Within the framework of the Latin American Integration Association (LAIA), Mexico and Chile signed a free trade agreement in 1991. Under the agreement, tariffs and other import restrictions for certain agricultural products will be eliminated by January 1996 --except tariffs for a few sensitive commodities which will reach zero by 1998. Mexico's trade with Chile more than doubled in 1993, compared to the pre-agreement status.

Within the framework of the G3, Mexico and Costa Rica signed a free trade agreement April 5, 1994, which is scheduled to go into effect in January 1995. Under the agreement, both countries will, immediately after implementing the agreement, eliminate tariffs on three-fourths of traded agricultural products. Tariffs on the remaining more sensitive products (including bananas, sugar, beef, and poultry), will be phased-out within 5-10 years, depending on the product.

Negotiations for bilateral trade agreements between Mexico and Bolivia and Mexico and Nicaragua, and among Guatemala, El Salvador, and Honduras are currently under way. Currently, Mexico finds itself in a conflicting position participating in NAFTA and remaining an ALADI member country. Article 44 of the Montevideo Treaty requires that countries that give special treatment to another country's products shall extend such treatment, immediately and unconditionally, to the rest of ALADI member countries.

Colombia grants tariff preferences to ALADI and Andean Pact country members. Most agricultural imports from Andean Pact countries are exempt from all tariffs and are not charged the 13 percent surcharge assessed all other imports. Within the framework of the Andean Pact, Colombia and Venezuela signed a free trade agreement in 1992. In the context of these negotiations, both countries agreed to eliminate all tariff and non-tariff barriers to trade. As a result, bilateral trade between Colombia and Venezuela increased to over \$2 billion in 1993, four times its level in 1991, the year before duty-free market access was established. In 1993, Colombian exports to Venezuela increased more than 30 percent, while Venezuela's exports to Colombia grew by almost 20 percent. The two countries also established the Andean region's first binational customs union in January 1992 and apply a common external tariff.



Extending the complementary economic agreement that Colombia and Chile signed back in December 1987 within the framework of ALADI, Colombia and Chile signed a free trade agreement on December 12, 1993. The accord, implemented January 1994, establishes a 5-year period to gradually liberalize all bilateral trade. Colombia, Venezuela, and the Central American countries signed on February 12, 1993, a complementary economic agreement to eliminate mutual tariffs by the end of the decade. Implementation of the agreement is to begin in 1994.

The bilateral agreements that Chile signed with Mexico, Venezuela, and Bolivia envisage the extension of MFN status to reciprocal investment. Chile has declined invitations to join the MERCOSUR common market, as its trade barriers are much lower than those of the group (since July 1991, Chile has applied a flat ad-valorem tariff of 11 percent on all agricultural imports). However, in 1991 Chile and Argentina signed a CEA to promote free trade and reciprocal investment. For Chile, the Argentinean market is very attractive for its pork and poultry meats. For Argentina, Chile represents an attractive market for its cereals, sugar, meats, and oilseed products. Also, Argentina's access to Chilean ports represents significant savings in marketing and transportation costs, especially for its horticultural products.

Since 1993, Chile has been actively seeking membership in NAFTA. Negotiations for bilateral free trade agreements between Chile and Ecuador, Bolivia, and Venezuela are currently under way. In addition to the trade accord with Chile, Bolivia, and Peru reached in 1992, a bilateral trade accord for several products, including agricultural commodities, also authorizes a Bolivian free trade zone in a Peruvian port, partially satisfying Bolivia's long term goal of gaining access to the sea. Peru withdrew from the Andean Group until April 1994, but signed (in addition to the trade accord with Bolivia in 1992) a Peru-Venezuela trade agreement under which both countries will abide by the tariffs negotiated within the Andean Group. Venezuela and Argentina have signed a framework agreement covering trade of soybeans and other oilseeds.

### **What Lies Ahead**

The movement toward hemispheric economic integration is gaining momentum and attracting more attention both from the U.S. and the rest of LAC after the successful conclusion of NAFTA. Already Chile, Venezuela, and Colombia have applied for inclusion in NAFTA.

Eligibility requirements for inclusion in NAFTA have already been established: free markets, monetary stability, fiscal reforms that do not rely on trade taxes, opening of the capital account, and a functioning democracy (Schott, 1992). In addition to Mexico, only Chile currently meets these preconditions, although most countries are making serious attempts to attain them.

The importance of a WHFTA for most LAC countries resides, not so much in the lowering of tariffs, since the U.S. already extends tariff preferences for several commodities to most LAC countries under the Generalized System of Preferences, but on the removal of non-tariff barriers for agricultural products. Some 58 percent of agricultural exports from LAC countries are subject to non-tariff barriers.

From the U.S. perspective, the developing subregional groups can serve as a step towards a hemispheric trade accord by reducing the number of negotiating partners and advancing the harmonization of trade policies and practices. At the same time, the United States has an interest in further encouraging and locking in trade liberalization and market-oriented reforms in Latin America and the Caribbean.

For Latin American countries, a hemispheric partnership means access to markets, particularly in the United States. A preferential trading agreement will also have macroeconomic implications, since the ability to attract investment capital will permit the restoration of rates of economic growth needed to guarantee the permanence of democracy and market-oriented systems.

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Table 7.1

## U.S. agricultural export markets and import suppliers in the WH in 1993

Trading partner	U.S. exports	U.S. imports	Trade balance	Major commodities exported by U.S.	Major commodities imported by U.S.
-----Million Dollars-----					
Mexico	3,561.9	2,691.7	870.2	Coarse grains, soybeans, beef, wheat	Fresh vegetables, cattle, fresh fruit
Canada	5,271.2	4,620.6	650.6	Fresh fruits & vegetables, beef	Cattle, pork, beef, rapeseed
Venezuela	480.1	72.4	407.7	Wheat, coarse grains, soybeans	Coffee, bananas & soymeal, plantains
Peru	188.9	64.5	124.4	Wheat, soybean oil, coarse grains, rice	Coffee, raw beet & sugarcane, cocoa paste
Panama	106.8	51.3	55.5	Wheat, soymeal, coarse grains	Raw beet & sugarcane, coffee, fresh fruit
Bolivia	27.6	8.5	19.1	Wheat, wheat flour, products	Tree nuts, raw beet & dairy sugar cane
El Salvador	141.5	126.8	14.7	Sugar, wheat, soymeal, cotton	Coffee, raw beet & sugarcane
Paraguay	16.9	10.6	6.3	Coarse grains, dairy products	Vegetable oils, tobacco
Uruguay	5.9	29.4	-23.5	Dairy products, rice	Beef
Nicaragua	41.3	72.6	-31.3	Wheat, rice, animal fats	Beef, raw beet & sugarcane
Honduras	81.4	231.1	-149.7	Wheat, soymeal	Bananas & plantains, coffee
Ecuador	90.4	355.3	-264.9	Wheat, sugar, cotton	Bananas & plantains, coffee, cocoa beans
Argentina	84.6	393.3	-308.5	Processed fruit and vegetables, animal fats	Red meats, fruit & vegetable juices
Guatemala	177.4	495.2	-317.8	Wheat, coarse grains, plantains, sugar	Coffee, bananas & cotton
Chile	107.2	456.1	-348.9	Coarse grains, wheat, sugar	Fruit and vegetable juices (fresh/processed)
Costa Rica	145.5	553.2	-407.7	Coarse grains, soybeans, wheat	Bananas & plantains, coffee, beef
Colombia	216.6	811.0	-594.4	Coarse grains, wheat, soymeal	Coffee, cut flowers, bananas & plantains
Brazil	195.3	1,398.6	-1,203.0	Cotton, wheat, live animals	Coffee, tobacco, cocoa, fruit & vegetable juices

Source: ERS/USDA, Foreign Agricultural Trade of the United States (FATUS), 1993 Calendar year, preliminary.



## Trends in U.S./CBI Agricultural Trade and NAFTA's Potential Impact

*The Caribbean Basin Initiative (CBI), stimulated investment, production, and export of nontraditional Caribbean and Central American agricultural products to the United States, between 1983 and 1993. Traditional exports, declining until 1991, appeared to be unaffected by the CBI. In recent months, traditional exports have strengthened a little, but the primary growth in exports to the United States is being led by a few nontraditional products such as melons, pineapples and a few other horticultural products. NAFTA's impact on CBI agricultural exports is likely to be limited. A commodity by commodity assessment of growth in CBI exports suggests that perhaps 3 percent, but no more than 5 percent, of the growth in CBI agricultural exports to the United States is vulnerable to increased competition from Mexico resulting from declining tariffs during the first 3 to 5 years of NAFTA. [Richard N. Brown, Jr.]*

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### U.S. Share of CBI Agricultural Trade

For more than two decades, the United States has been the primary agricultural trading partner of the CBI countries, which, for practical purposes includes all the Central American and Caribbean Island countries except Cuba and the French West Indies. During the 1980's, the United States bought 40 to 45 percent of the agricultural exports of the CBI group and supplied the CBI group with 45 to 55 percent of its agricultural imports. Although total CBI trade data for 1992 and 1993 are not yet available, trade flows change little from year to year and preliminary estimates indicate that a growing percentage of CBI agricultural exports may begin to go to countries other than the United States in the 1990's, particularly as the development of regional trading blocks intensifies (table 1).

### Traditional Exports Show Little Growth

The value of U.S. imports of CBI traditional agricultural exports has not changed appreciably since 1984. The volume of some has increased while the volume of others has declined. CBI bananas and tobacco, for example, have continued to grow while imports of coffee, cocoa, sugar, and molasses have declined. U.S. beef and veal imports from the CBI group began to turn up in 1992 and 1993 as Nicaraguan beef came back into the U.S. market after being out for 10 years. These seven commodities by definition represent the traditional products imported by the United States from the Basin.

Prior to the CBI, this group of seven traditional export commodities accounted for 90 to 95 percent of the value of all agricultural products imported by the United States

from the region (table 2). NAFTA, however, is not expected to have any measurable impact on traditional CBI exports to the United States in the next few years, because: U.S. import duties on coffee beans, bananas, and cocoa beans have been zero for years; and, U.S. imports of the other four commodities are affected by other U.S. farm product programs.

### Nontraditional Exports Account for Growth

All other agricultural products exported from the basin, by definition, are classified as nontraditional exports of CBI countries, and the United States has regularly imported more than 450 of these CBI products annually since 1983. During the 1970's less than 5 percent of U.S. agricultural imports from the CBI region were nontraditional and the aggregate value averaged only \$100 million annually. Since the inception of the CBI, the value of U.S. imports of these products has increased steadily at 5 to 10 percent per year while imports of traditional products have been flat.

These commodities are the focal point of this analysis because the changing rules under NAFTA may change the relative costs of producing these products for export between Mexico and the CBI. South Florida growers and CBI growers are both concerned that NAFTA may erode their competitive position for selected products. A commodity by commodity analysis however is required because the before and after duty rates vary by product.

Initially the signing of the NAFTA is not expected to have much impact on this segment of the U.S. agricultural trade with the CBI group. But the reduction of U.S. import duties under NAFTA may give Mexican

growers a slight competitive advantage over CBI growers for a few noncompetitive products currently entering U.S. markets, particularly those with ad valorem tariffs in excess of 10 percent prior to NAFTA. Under the CBI, however, the U.S. duty on nontraditional CBI products has been zero since its inception.

### **Changes in the U.S. Share of Total CBI Agricultural Trade**

During 1981-83, U.S. agricultural imports from the region averaged about \$1.7 billion annually. The average was up slightly 10 years later, but still only \$1.8 billion, which is not particularly significant because year-to-year variations are often greater. The fact that the composition of U.S. imports from the CBI has changed is more significant.

U.S. agricultural exports to the region grew steadily during the 1980's, rising 40 percent overall from 1982 to 1992. In 1982 (1981/83 average) U.S. farm product sales to the CBI region totaled only \$1.1 billion annually. U.S. agricultural exports to the same region totaled \$1.6 billion 10 years later. But trade shares for the leading export commodities changed very little over the decade.

Of the agricultural export categories (ERS FATUS definitions) 11 continue to account for at least 90 percent of all U.S. agricultural exports to the region. Grains, feeds, livestock, and oilseed products dominate these exports. It appears that the CBI is not having any measurable affect on U.S. agricultural exports to the region. This was not a primary objective of the CBI initially, but exports were expected to grow as investment in the CBI countries increased.

### **Growth of CBI Nontraditional Agricultural Exports Continues**

According to current U.S. agricultural trade summaries, more than 450 commodities (H.S. Tariff Codes) are contained in the nontraditional import group from CBI countries.

From 1982 to 1992 U.S. imports of nontraditional products from the CBI countries increased steadily, after stagnating at \$100 million annually in the late 1970's. However, total U.S. imports of all agricultural products from Caribbean and Central American regions peaked near \$2.1 billion in 1980 when international markets were strong and coffee and sugar prices soared briefly. Since then agricultural imports from the region have averaged about \$300 million less than the peak. The decline of traditional imports has pulled the annual

### **CBI Background Note**

The cornerstone of the Caribbean Basin Initiative (CBI) is the duty free access offered products of Caribbean or Central American origin entering the United States. However, similar options have been available since 1975, and under the Generalized Systems of Preferences (GSP) for many agricultural products exported to the United States by the CBI beneficiaries, as well as other developing countries.

The CBI, as originally proposed by President Reagan in December 1981, was envisioned as a broad package of trade, investment, and tax incentives, to encourage more economic development by the private sector in Central America and the Caribbean. After months of debate, Congress sent The Caribbean Basin Economic Recovery Act (CBERA) to the President and he signed it on August 5, 1983. (P.L. 98-67, Title II, Caribbean Basin Initiative). The provisions of the Act became effective January 1, 1984.

The strong investment and tax incentives initially proposed by the President did not survive months of debate that followed. The duty-free access option survived the process, with few exceptions. The most notable exceptions (products not eligible for duty free entry) included selected wearing apparel, some leather goods, canned tuna, selected watch parts, and most crude and refined petroleum products. Like sugar and beef products, most products excluded from duty free access by the CBI, were already subject to domestic programs previously enacted by Congress, which restricted imports. The CBERA waived none of these, and they essentially remain in place as amended in 1990. (P.L. 101-382).

Some of the restrictions in the original Act, including the initial 12-year limit on duty free access to the U.S. market, were eliminated by the amendment in 1990. The 1990 amendment reduced uncertainty in the private sector because it indicated the U.S. government was committed to long-term support of private sector investment and development in the Caribbean Basin. The amendments also encouraged the 28 countries (initially 27), designated as eligible beneficiaries, to make additional investments in their local economies. The CBI group includes all 7 Central American countries, 19 Caribbean Island countries, plus 2 countries on the North Coast of South America.



Table 8.1

U.S. share of Caribbean and Central American agricultural trade, calendar years 1982-93.

Partners	Units	1979-81 Average	1981-83 Average	1989	1990	1991	Est. 1992	Est. 1993
CBI Agricultural Exports to:								
World 1/	\$Bil.	5.0	4.3	3.9	4.2	4.1	4.5	4.3
USA 2/	\$Bil.	2.1	1.7	1.6	1.7	1.7	1.8	1.7
U.S. share	Percent	42	40	41	40	40	40	40
CBI Agricultural Imports from:								
World 1/	\$Bil.	2.6	2.7	2.7	2.7	2.9	3.0	3.1
USA 2/	\$Bil.	1.1	1.2	1.5	1.5	1.5	1.6	1.7
U.S. share	Percent	42	44	55	55	53	53	55

1/ FAO, Trade Yearbooks, 1987, 1988, 1990, and 1991.

2/ A simple summation of official U.S. agricultural trade with the Caribbean and Central American regions provides a very close approximation of U.S. agricultural trade with designated CBI countries.

Source: ERS-USDA, Foreign Agricultural Trade of the United States (FATUS), various calendar year issues.

Table 8.2

U.S. imports of traditional and nontraditional agricultural products from Central America and the Caribbean, calendar years, 1979-93.

Commodity group	1979-81 Average	1981-83 Average	1989	1990	1991	1992	1993
----- Million U.S. dollars -----							
Total Ag. 1/	2,030	1,718	1,617	1,698	1,658	1,810	1,871
Traditional	1,925	1,587	1,324	1,372	1,320	1,426	1,453
Coffee	688	488	409	413	378	381	346
Bananas	307	372	490	454	455	539	535
Sugar	543	442	177	230	222	254	246
Beef & Veal	240	153	138	157	157	130	193
Molasses	37	33	23	31	35	34	27
Cocoa	89	66	57	58	43	41	44
Tobacco	21	32	30	29	30	47	61
Nontraditional 2/ (all other)	105	131	293	326	338	384	418
----- Percent -----							
As a percent of:							
Previous Year	...	...	117	111	104	114	109
Total Ag.	5	7	18	19	20	21	22

1/ A simple summation of official U.S. agricultural imports from the Caribbean and Central American regions provides a very close approximation of U.S. agricultural imports from CBI designated countries. (Table updated July 25, 1989, and revised Dec. 11, 1989, Feb. 27, 1991, Sept. 3, 1993, Mar. 3, 1994).

2/ Includes approximately 450 different Tariff Schedule items, or H.S. Codes.

Source: ERS-USDA, Foreign Agricultural Trade of the United States (FATUS), various calendar year issues.

average down since the base period, and it appears the flow of traditional imports may remain flat for the next year anyway.

Bananas, a traditional CBI export, dominate the fresh fruit export trade of Central America. Currently, fresh melons and pineapples are the fastest growing components of the nontraditional exports from the region, and they dominate the remaining non-banana fruit trade of the region. Mangoes, avocados, and citrus account for most of the rest of the U.S. fruit imports from the CBI region. A few other fruit products are imported by the U.S. but the annual volume is small and increasing slowly. The CBI, to date, has had limited impact on Caribbean Island fruit growers. Central American fruit growers appear to have been the primary beneficiaries during the first 10 years of the CBI.

CBI juice exports to the United States are dominated primarily by orange and pineapple juices, of which 75 percent originate in Central America and 25 percent among the islands. Other prepared, processed, or preserved fruit products have never been a significant segment of the fruit and fruit product exports to the United States in absolute volume.

Vegetable and vegetable product exports to the United States represent the second largest nontraditional growth category for the CBI countries. Vegetables and vegetable products increased from \$38 million to \$105 million during the period, while fruit exports, other than bananas and juices, increased from \$17 million in 1982 to \$133 million in 1992.

Vegetable and vegetable product export growth is less concentrated than for fruits, which suggests that it may be less vulnerable to competition from Mexico, Chile, or some other country. But further analysis of individual commodities in the other vegetable export FATUS subgroups is needed to verify or refute this conclusion.

The most visible vegetable products composing CBI agricultural exports to the United States include: fresh and frozen broccoli, cauliflower, peas, okras and squash; fresh cucumbers; processed soups and sauces; and other fresh, frozen and prepared or preserved vegetables.

More than 80 percent of the CBI vegetable and vegetable product export growth originated in the Central American countries, as might be expected, because these countries still have more land per capita to devote to export crops than the Caribbean countries. Cuba is not eligible for CBI.

Table 8.3  
U.S. nontraditional agricultural imports from CBI countries, 1981-83, 1991-93.

Product and Origin	1981-1983 Avg	1991-1993 Avg	Percent as of 1981-83
Million Dollars			
Nontraditional Products (all except seven traditional)			
Central America	61	276	455
Caribbean Islands	70	104	148
CBI	131	380	290
Noncompetitive, except bananas, coffee & cocoa products			
Central America	6	5	89
Caribbean Islands	9	7	72
CBI	15	12	78
Animals, & Products, except beef & veal			
Central America	3	7	210
Caribbean Islands	9	1	14
CBI	12	8	67
Fruits and Preparations, except juices			
Central America	9	108	1174
Caribbean Islands	7	25	338
CBI	17	133	803
Fruit juices fresh, frozen & canned			
Central America	2	18	57
Caribbean Islands	1	6	602
CBI	3	24	734
Nuts and preparations			
Central America	2	5	255
Caribbean Islands	4	7	173
CBI	6	11	201
Vegetables & preparations, and some juices			
Central America	14	72	518
Caribbean Islands	24	33	138
CBI	38	105	278
Oilseeds and oilseed products			
Central America	9	18	203
Caribbean Islands	2	3	156
CBI	11	21	195
Cut flowers, ferns, etc.			
Central America	3	15	484
Caribbean Islands	1	2	327
CBI	4	18	453
Nursery stock, plants, bulbs, etc.			
Central America	5	14	296
Caribbean Islands	1	2	173
CBI	6	16	273
Other Plant Products, Competitive			
Central America	7	13	176
Caribbean Islands	12	18	148
CBI	20	31	158

Source: ERS-USDA, FATUS, various issues.



On a percentage basis, the volume of these products has also increased significantly during the past decade, but generally the export markets are also limited and not usually affected by blanket changes in the tariff schedules of trading partners.

Central American sesame seeds, for example, dominate CBI exports of oilseeds and oilseed products to the U.S. market. However, the import duty on both Mexican and CBI sesame seeds is zero both before and after the signing of the NAFTA, so there would appear to be no change in the relative competitive position of either area. Similarly, Caribbean coconut meat and Central American macadamia nuts account for the bulk of the increases in U.S. imports of nuts from CBI regions and do not appear to be subject to increased competition from Mexico under NAFTA. Before NAFTA, the duty on coconut meat was zero and on macadamia nuts was less than 2 cents per pound.

U.S. imports of cut flowers and nursery stock have been growing for years and do not appear to have been driven by the CBI or any other trade agreement. U.S. import demand has been growing steadily for several years and the CBI countries have shared in that growth. The CBI share of the U.S. market remains small and specialized, and not particularly vulnerable to tariff reductions under NAFTA, the Andean Trade Preference Act (ATPA), or any other proposed free trade agreement in the Western Hemisphere.

### **NAFTA's Impact on CBI Exports to the U.S.**

The maximum potential impact of NAFTA on the current CBI share of the U.S. agricultural import market may total less than \$50 million, but is definitely not expected to exceed \$100 million during the first 10 years of the CBI because of the limited number and composition of the commodity groups showing the most growth in exports to the United States. In other words, only 20 to 35 percent of the \$290 million growth in CBI nontraditional exports to the U.S. during the past 10 years is potentially vulnerable to Mexican competition because of NAFTA. Furthermore, the annual value of nontraditional CBI exports to the U.S. market is expected to continue increasing over the next 5 years, because of the continuing strong performance of selected commodities not affected by NAFTA tariff reductions.

There will be gainers and losers, but other factors seem to be more important to changing shares than scheduled reductions in tariff rates. Although duty free access for Caribbean products in the U.S. market is the cornerstone of the CBI, it also clearly implies that only commodities subject to substantial import duties in the United States are most likely to be affected by any free trade agreement with the United States and its partners.

### **Some Reasons Behind Nontraditional Export Growth Benefits**

Central America also dominates the growth in CBI exports to the United States of four other nontraditional export subgroups: oilseeds and products; nuts and products; cut flowers and ferns; and nursery stock. The volumes actually exported to the United States, however, are still relatively small and tend to be highly specialized.

Changes in trade flows over time help identify the exporting countries and commodity groups that are potentially most vulnerable to changes in the competitive position of signatories of a NAFTA-type agreement. But changes in consumer tastes and preferences and changes in production and marketing technologies are also constantly occurring and affecting the relative competitive positions of producers. Climate and soils also give producers in some areas a strong competitive advantages over producers in other areas.

Given this background, it appears that CBI growers and exporters may be overly pessimistic about the impact NAFTA may have on Mexico's competitive position in the United States over the next 5 to 10 years, because: Mexico dominates the U.S. market for only a few nontraditional products; tariffs have generally been low on tropical zone products entering the United States market; and, it appears the CBI's nontraditional export growth items of the past 10 years are similar but different products from those dominated by Mexico. In summary, Mexico has its specialty exports and the CBI countries have theirs and the two lists may be similar but in reality have some significant differences.

Pineapples, for example, present an interesting case study. Mexican growers started losing their share of the U.S. fresh market long before the CBI was proposed in December 1981, and that trend continues. U.S. consumers have also developed a distinct preference for Hawaiian varieties that are primarily distributed by the large fruit companies, which continue to promote CBI pineapples in the U.S. market. Market structures and production efficiencies, therefore, appear to favor CBI pineapples, not import duties, because import duties on pineapples from all sources have been zero for years. U.S. import tariffs, at least, are not a factor.

Melons represent a slightly different scenario. Both Mexico and CBI countries produce excellent melons that are well received in the U.S. market during the off-season for U.S. producers. Prior to the CBI, Mexico supplied over 90 percent of the melons imported by the United States. During the first few years of the CBI, CBI growers experimented with new varieties and found they could effectively compete with Mexican growers in

the U.S. market, while Mexican melons were charged a 20 to 35 percent ad valorem duty on entry into the U.S. market. By 1990 Mexico had lost its dominant share of the U.S. market to the CBI. Since the mid-1980's Mexican cantaloupes have been granted duty free access to the U.S. market during the off season, but the Mexicans continued to loose market share through 1993.

In 10 years, CBI growers have gained the largest share of the U.S. melon import market, and in 1993, a year in which Mexican melons were admitted duty free under a waiver of GSP rules, CBI melons recorded the largest market gains. This track record strongly suggests the NAFTA will not have a serious negative impact on CBI growers for the next few years, or at least until Mexico can develop new varieties or technologies. Weather problems reduced Mexico's crop in 1992 and 1993, and that helped CBI growers, but there appear to be other factors that have not clearly been identified at this point.

The specific commodity scenarios above strongly suggest that economic factors, in Central America in particular, are such that CBI growers can currently compete directly with Mexican growers for a number of nontraditional products imported by the United States, even as the remaining U.S. duties on Mexican products are being reduced to zero over the next few years.

## Conclusions

It appears that nontraditional agricultural exports of the CBI countries will continue to capture an increasing

share of CBI agricultural exports to the United States in the 1990's. Furthermore, it appears that the primary and potential competitors of Caribbean and Central American growers will remain in Mexico and other Latin American countries, with or without a NAFTA, and that a reduction in U.S. import duties on nontraditional products of Mexican origin will have a minimal effect on the current flow or share of CBI products entering the U.S. market. It also seems clear that NAFTA will have little, if any effect on the flow or share of traditional CBI products entering the U.S. market. And, finally, NAFTA will not have a measurable effect on U.S agricultural exports to the CBI region, but NAFTA is expected to increase U.S. agricultural exports to Mexico.

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## U.S. Sugar Policy and Trade in the Western Hemisphere

***Sugar is a major crop in the Western Hemisphere and many nations rely on it as their basic crop. United States sugar policy restricts access to the U.S. market and supports U.S. sugar prices at levels much higher than the world price. Neither the North American Free Trade Agreement (NAFTA) nor the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) will significantly affect U.S. sugar policy or access to the U.S. sugar market. [Mark Peters and Bob House]***

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Sugar is an important cash crop to many Western Hemisphere countries. For many countries, particularly the larger nations of Central America and the Caribbean, sugar sustains the contemporary political and economic environment.

All the hemisphere's sugar producing countries intervene in the market to support their domestic producers. Because the United States is the region's largest net importer of sugar, its interventions have probably affected the hemisphere's sugar trade the most. The U.S. sugar program encourages domestic production and severely limits access to the U.S. market, and has caused U.S. sugar imports to fall 62 percent since 1981.

Loss of U.S. sugar market share has affected the economies of hemisphere sugar producing countries, contributing to reduced incomes and increased unemployment. The effects of the reduction in U.S. sugar imports have tended to offset the effects of trade and development programs, such as the Caribbean Basin Initiative (Messina and Seale).

NAFTA and the recently concluded GATT are aimed at opening up markets to international trade. The agreements, however, will have little effect on sugar trade in the hemisphere as they make no significant changes to U.S. sugar policy or access to the U.S. sugar market.

### Sugar in the Western Hemisphere

The Western Hemisphere is both a major sugar producing and consuming region. Countries in the Western Hemisphere produced 34.3 million metric tons, raw value, of sugar (both cane and beet) in 1993/94, nearly 31 percent of total world production. Hemisphere countries consumed 29.4 million metric tons, accounting for 26 percent of total world consumption.

### Sugar Production

Leading producers in the Western Hemisphere are Brazil, the United States, Cuba, and Mexico. Together they accounted for nearly three quarters of total hemisphere production in 1993.

Brazil is the world's third leading sugar producer behind the EU and India. Over two-thirds of the sugar cane grown in Brazil is used to produce ethanol for fuel, which limits Brazil's ability to increase sugar production.

The United States ranks fifth as a world sugar producer, producing sugar from cane and beets. The U. S. also produces over 7 million tons of high fructose corn syrup (HFCS) per year. Government supports since 1981 have stimulated sugar production. From 1982 to 1992, beet sugar production increased 45 percent while raw cane sugar production increased 10 percent.

Cuba has historically been one of the world's largest sugar producers. In recent years, exports and production were sharply reduced by the breakup of the Soviet Bloc. Production, in 1993/94, is projected to be 4.3 million metric tons, 46 percent below the 8 million metric tons it produced in 1989/90--before support from the Soviet Bloc was dismantled. Cuban sugar production continues to be constrained by inadequate production inputs--ranging from fertilizer to fuel--and a deteriorating infrastructure.

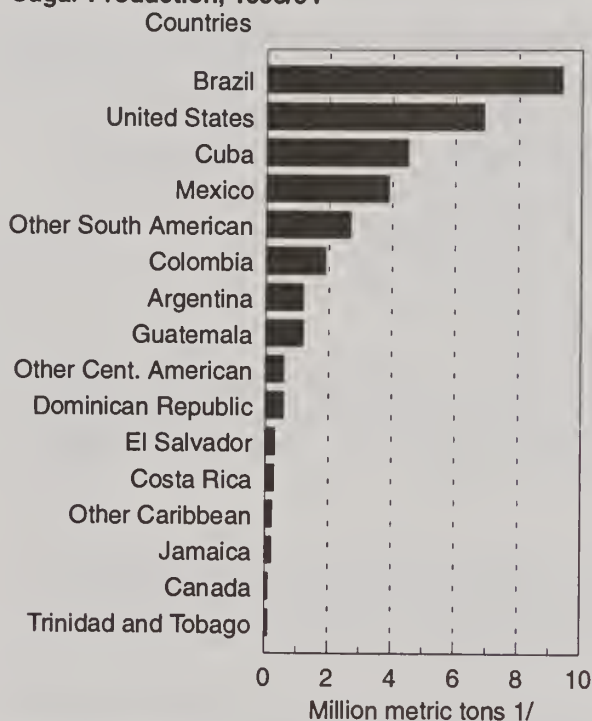
### Sugar Consumption

Leading consuming nations in the region are the U.S., Brazil, and Mexico. Of these countries, only Brazil is a net sugar exporter. Both the United States and Mexico are net sugar importers. Per capita consumption of sugar in the U.S. fell sharply from 89.2 pounds in 1971 to 60.1 pounds in 1986 as HFCS replaced sugar in soft drinks and some other processed products. Since 1986, U.S. per capita sugar consumption has risen slightly to 64.5 pounds in 1992. Per capita consumption in Brazil also has been falling from 110 pounds in 1981 to 98 pounds

## Sugar in the Western Hemisphere at a Glance

Figure 9.1

### Sugar Production, 1993/94

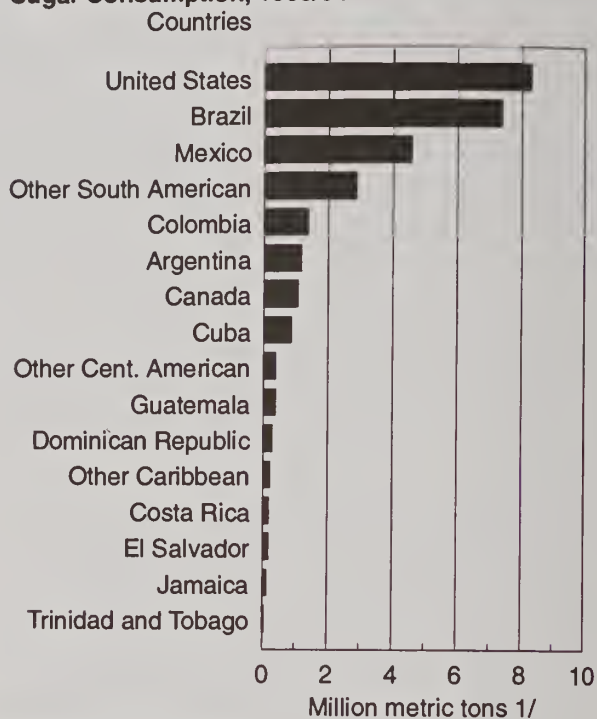


Source: USDA, 1993

1/ Raw value

Figure 9.2

### Sugar Consumption, 1993/94

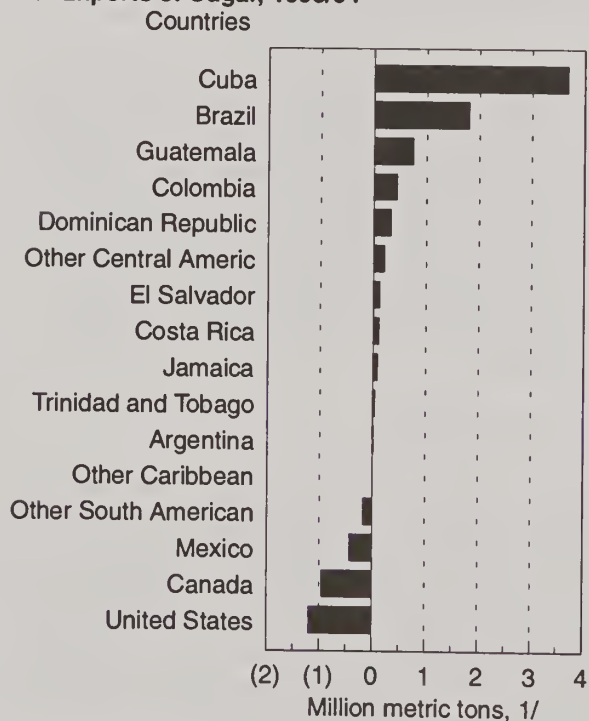


Source: USDA, 1993

1/ Raw value

Figure 9.3

### Net Exports of Sugar, 1993/94

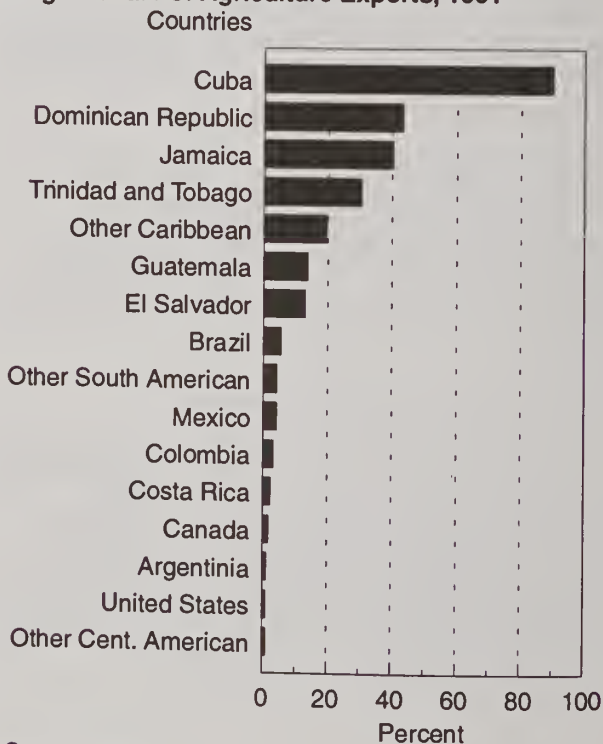


Source: USDA, 1993

1/ Raw value

Figure 9.4

### Sugar: Share of Agriculture Exports, 1991



Source: FAO



in 1992, but unlike in the United States this is primarily in response to deteriorating economic conditions. Per capita consumption in Brazil is expected to increase once real personal income begins to rise. Per capita consumption in Mexico has increased from 100 pounds in 1981 to 108 pounds in 1992.

The U.S. sugar program and the EU's Lome Agreement provide markets with premium prices, but limit market access for the hemisphere's sugar exporting countries. The Lome Agreement permits countries with strong colonial links with the United Kingdom, the most important being Mauritius, Fiji, Guyana, Jamaica, and Swaziland, to export 1.4 million metric tons of raw sugar to the EU at the EU raw sugar intervention price. The high prices paid under the preferential market access agreements have led some sugar exporting countries to import sugar for their own domestic use in order to meet their export allocations to the United States or the EU. The arrangements between Cuba and the Former Soviet bloc under which Cuba received implicit subsidies are over. Cuba now receives no premium for its sugar, but some agreements on volume trade continue.

### **Sugar Exports**

Cuba ranks second, behind the EU, as a sugar exporter, however, unlike the EU, the bulk of Cuba's production goes to export markets. The dismantling of the Soviet bloc and internal production problems have caused Cuba's sugar exports to fall 43 percent from 6.1 million metric tons in 1991/92 to 3.5 million metric tons in 1993/94. Cuba now exports all of its sugar at or near the world price.

Brazil is the world's fifth and the region's second largest sugar exporter. It is one of the few major sugar exporters not to have a sizable share of its exports covered under either the EU's Lome Convention or the U.S.'s sugar program. As a consequence it sells most of its sugar at the world price.

Guatemala is the region's seventh leading producer and its third largest exporter. The Guatemalan government sets relatively high grower and consumer prices, leading to increased production. Of exports, 6 percent receive a premium price under the U.S. quota and the remainder, the world price.

Sugar plays a critical role in the trade and economies of many Central America and Caribbean countries, although they do not rank as major sugar producers. Caribbean countries export over 50 percent of their sugar production. Sugar exports account for over 20 percent of Caribbean agriculture exports. It is the second leading agricultural export for Central America and the Caribbean as a whole.

### **Current U.S. Sugar Policy**

Major objectives of U.S. sugar policy are to support domestic sugarcane and sugar beet prices while ensuring traditional importing nations a minimum share of the U.S. market (see box for history). The support price is maintained by placing a tariff rate quota on imports and, when necessary, restricting domestic sugar marketing. Legislation passed by Congress stipulates that the sugar program is to be run, if possible, at no net cost to the U.S. Treasury. Consequently, the major cost of the program is borne by U.S. consumers.

Under the current sugar program, the United States supports the price of raw cane sugar at 18 cents per pound. The price of refined beet sugar is supported at a price based on the historical relationship for grower return for beet sugar compared to cane sugar. In 1993 the loan rate for refined beet sugar was set at 23.62 cents per pound.

The United States determines from year to year the size of the tariff rate quota. The tariff rate quota is set so as to ensure that the domestic price of sugar will not fall below the support price. The tariff rate quota amount for 1993 and 1994 combined was 2.268 million metric tons. Allocation of tariff rate quota among sugar importers is determined by their historical share of U.S. sugar imports.

Under the tariff rate quota system, sugar imported under the quota is subject to a duty of 0.625 cents per pound, raw value basis. Sugar imported under the quota from CBI and Generalized System of Preferences countries enters duty-free. All sugar imported above the quota is subject to a duty of 16 cents per pound, raw value.

Since the implementation of the sugar program in 1981 and the emergence of high fructose corn syrup as a sugar substitute in the 1970's and early 1980's, the sugar import quota has been lowered significantly. As a result, total sugar imports fell from 4.5 million metric tons in 1980/81 to a forecast 1.6 million metric tons (including re-export sugar) in 1994 (a 64 percent decline). Imports from Central America, the Caribbean, and South America fell from 2.93 million metric tons in 1981 to 1.12 million metric tons in 1992.

In part to ensure minimum access to the U.S. market for traditional suppliers, Congress instituted a minimum import access level of 1.25 million short tons per year. If estimated imports fall below 1.25 million short tons, domestic sugar marketing restrictions or allotments are imposed. Marketing allotments were imposed under this

## History of U.S. Sugar Policy

Sugar has always been one of the most protected crops grown in the United States. For most of the period prior to 1934, however, duties were imposed primarily to raise revenues.

The Congress passed its first comprehensive sugar policy in 1934 in response to low prices caused by the Great Depression. The legislation established both import and domestic production quotas. It also set shares and allotments in the market for sugar processors and made payments to domestic producers.

Comprehensive regulation of the U.S. sugar market ended when the U.S. Sugar Act expired in 1974. From 1975-76, the U.S. market remained completely open. The U.S. government instituted price-support programs from 1977-1978 to protect domestic producers from the effects of low world sugar prices. An amendment to the Food and Agriculture Act of 1977 set a price floor for sugar at 13.5 cents per pound for the 1977 and 1978 crops. In addition, duties were placed on sugar imports to maintain the domestic price above the support price. During the 1970's additional fees on imported sugar raised combined import fees and duties from .625 cents per pound to 3.36 cents per pound. Import fees and duties were slashed back to the basic duty of .625 cents per pound in 1980 due to the sugar price spike.

Congress reinstated a comprehensive sugar policy with the passage of the Agriculture and Food Act of 1981. The Act established price supports for domestically produced sugar at 18 cents per pound for cane sugar and a pro-rated price for beet sugar. Duties and fees on imports were used to maintain the domestic price above the support price until 1982, when an amendment was passed imposing an import quota. In 1985, Congress passed the Dole Amendment which required that all available authorities be used to ensure that the sugar program be run at no net cost to the U.S. Treasury.

The 1990 Farm Act extended the sugar program through fiscal year 1996. It also set up marketing controls on domestic cane and beet sugar to be triggered if projected imports of sugar fall below 1.25 million short tons, raw value.

In 1990, the U.S. replaced the absolute quota with a tariff-rate quota. The tariff-rate quota was designed to have the same effect as the previous absolute quota and bring the U.S. sugar program in compliance with GATT. Under the tariff-rate quota system, sugar imported under the quota is assessed a duty of .625 cents per pound while sugar imported above the quota is assessed 16 cents per pound. The duty of .625 cents per pound does not apply to beneficiary countries of the GSP or CBI.

Figure 9.5  
U.S. and Caribbean Sugar Prices  
Cents per pound, raw value

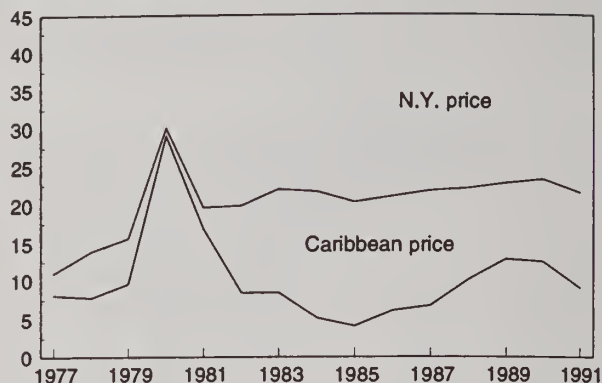
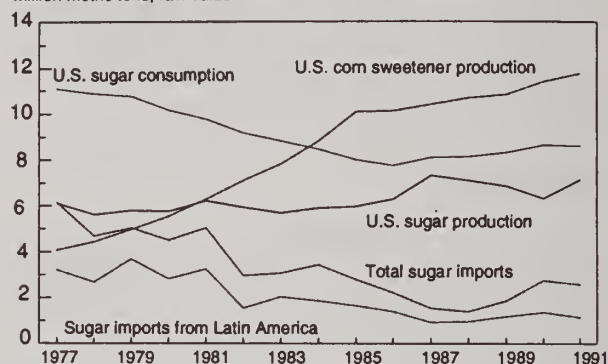
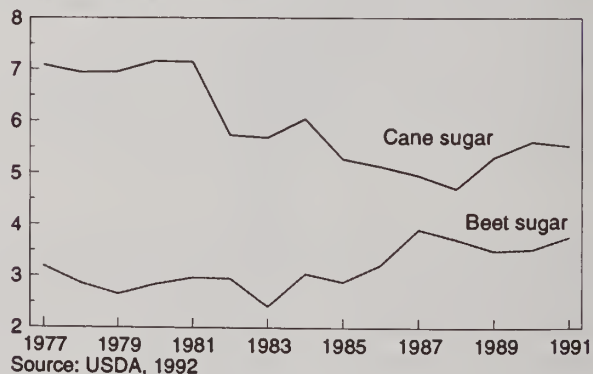


Figure 9.6  
Supply and Use of Sugar and Corn Sweetener  
Million metric tons, raw value



Source: Agricultural Statistics and FATUS USDA, 1992

Figure 9.7  
Production of Cane and Beet Sugar  
Million metric tons, raw value



Source: USDA, 1992

rule during the last quarter of fiscal year 1993 (October 1992 - September 1993).

The sugar program, while stabilizing the domestic price of sugar, has created a wide gap between the world price and the U.S. price. In 1993, the U.S. raw sugar price was 21.62 cents per pound, more than double the world raw sugar price of 10.03 cents per pound. This has led to a significant increase in imports of sugar containing



products, such as sweetened cocoa and chocolate; miscellaneous food preparations; and flavored sugars, syrups, and molasses. In the 1980's, the U.S. imposed import quotas on many of these products under Section 22 of the Agricultural Adjustment Act, to protect the sugar price support program.

Future access of traditional import suppliers to the U.S. sugar market is likely to be near the minimum level of 1.25 million tons per year. Past increases in domestic sugar production and reductions in sugar consumption squeezed the share of the market available for sugar imports. In recent years, domestic sugar production has risen--especially sugar beets--in response to the support price. Domestic consumption of sugar has risen too. In the 1970's and 1980's, the U.S. sweetener market saw less expensive high fructose corn syrup gain market share against refined sugar, since 1986, when soft drinks completed their conversion to HFCS, the advance of HFCS market share has slowed.

### **NAFTA's Effect on U.S. Sugar Policy**

NAFTA eliminates most trade barriers among the United States, Canada, and Mexico over 15 years. Under the agreement, Mexico will continue to have annual duty free access to the U.S. market for 7,258 tons of sugar under the tariff rate quota. In addition, if Mexico qualifies as a net surplus producer, then it will have duty free access for a maximum of 25,000 metric tons during the first 6 years of the agreement, and for a maximum of 250,000 metric tons for the remainder of the 15 year phase-in period. Under the agreement, Mexico qualifies as a net surplus producer of sugar if projected production exceeds projected consumption of sugar and high fructose corn syrup.

NAFTA also reduces tariffs on sugar traded between the United States and Mexico by 15 percent by the end of year 6 and to zero by year 15. In addition, by the end of year 6 Mexico will install a tariff-rate quota system similar to the U.S.'s and an equal second tier tariff. NAFTA does not provide duty-free access for refined sugar that was not made from raw sugar produced in either country. This prevents NAFTA members from importing raw sugar from other countries and reexporting the refined product to other NAFTA countries.

As Mexico is currently a net sugar importer, when the NAFTA sugar provisions commence October 1994, Mexico will not gain additional duty free access to the U.S. In the short run, NAFTA will have little effect on the U.S. sugar program. The evolution of Mexico's sugar industry will depend more upon Mexico's domestic price policy than NAFTA. If Mexico maintains a sugar price support system and raises the price supports towards U.S.

levels, Mexican sugar production will be stimulated and consumption depressed.

If Mexican sugar prices become comparable to the U.S., there will be a great incentive for HFCS substitution in the Mexican soft drink industry, which would sharply reduce Mexican sugar use and potentially generate an exportable sugar surplus. By the NAFTA formula, however, Mexico would not attain net surplus status unless its sugar production exceeded consumption of sugar and HFCS combined; Mexico will not gain increased access to the U.S. sugar market by substituting HFCS for sugar.

### **GATT's Effect on the U.S. Sugar Program**

The major change to the U.S. sugar program under the recent GATT agreement is a 15 percent reduction in the U.S. duty on sugar imported above the low duty import level. This would reduce the duty from the 17 cents per pound base level to 14.45 cents per pound, raw value. The reduction in the second-tier duty will have no effect on U.S. sugar production or imports. At 14.45 cents per pound, the duty would remain prohibitive as long as the world price stays above 6 cents per pound (Lord).

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## Policy Changes and Subsidies in the Western Hemisphere

***Producer Subsidy Equivalents (PSE's) of eight countries and a survey of policies that affected agriculture in 27 Western Hemisphere countries demonstrate how most have drastically changed their policies since the mid-80's. Even with the reformulated policies, government intervention continues to be substantial in some Western Hemisphere countries. [Frederick Nelson and Chris Bolling]***

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Western Hemisphere countries have made great strides toward trade and agricultural policy reforms since the mid-80's. The CFTA and NAFTA were approved in 1989 and 1993 respectively. The global Uruguay Round of the GATT came to closure in 1993. All Western Hemisphere countries are GATT members, except Ecuador, Cuba, and a few Caribbean islands. Most countries in the Western Hemisphere strengthened free trade areas and bilateral agreements during the 1990's.

While the degree of change varies among countries, most reduced trade distortions and agricultural subsidies and taxes somewhat since the mid-80's. Reforms in the United States and Canada were not as extensive as those of Mexico and the large agricultural producers in South America (Pollack). The United States and Canada continue to operate unique programs to limit production and marketings, which in conjunction with continuing agricultural subsidy programs, also limit the costs and benefits of the programs. Most countries held over some farm and consumer programs from their old policies.

This article examines: (1) The policy changes and current policy environment in 27 Western Hemisphere countries, and (2) the agricultural subsidies (or taxes, if the subsidy is negative) in eight major Western Hemisphere countries.

### Overview of Policy Reform

Latin America's decade of recession in the 1980's, combined with accumulation of a mountain of foreign debt, led to an unprecedented crisis. At blame were high government expenditures used to encourage domestic agricultural production, reduce agricultural imports, and finance general import substitution policies, which most of Latin America embraced. In the United States and Canada, competition for export markets, large national government deficits, and increased pressure to control agricultural spending were forces shaping policy reform. These pressures, plus increased appreciation that trade liberalization and policy reform would lead to increased trade volume, economic growth, and reduced government deficits, brought about considerable rethinking of agricultural and trade policies throughout the Hemisphere.

Encouragement for new thrusts in Latin American policy originated in the GATT, World Bank, International Monetary Fund, Paris Club, other international lenders, the U.S. government, and other nations. These institutions helped to restructure Latin America's foreign debt in the late 1980's and early 1990's, often making trade liberalization and policy reform requirements in the refinancing packages. Other changes in policy were required as countries sought membership in GATT.

The Uruguay Round of the GATT negotiations, which began in 1986 and concluded in 1993, set the stage for other reforms through other multilateral agreements. The stated goal of the Uruguay Round was to stave off the collapse of international trade because of the buildup of trade barriers during the 1980's. Within the multilateral framework of the GATT, the United States and Latin America explored the possibility of other free trade areas that could enhance trade in the hemisphere.

### Resulting Policy Reforms

CFTA, implemented in 1989, was the first of the hemispheric agreements to radically reduce trade and investment barriers between the United States and Canada.

Mexico joined GATT in 1986, and subsequently, the United States and Mexico deepened their commitment to expand trade and investment when Mexican President Salinas asked President Bush to consider a free trade agreement in 1990. Canada joined in negotiations with the United States and Mexico in 1991, and the three created the NAFTA.

Several Latin America regional trade organizations have become more important in recent years, including the Central American Common Market, the Andean Pact, MERCOSUR, and CARICOM. Chile and Argentina embraced the philosophy of free trade and were active in the Uruguay Round as members of the Cairns Group.

Most Latin American countries have, since the mid-80's:

- Limited the roles of parastatal trading organizations in agriculture, and sometimes eliminated the organization.<sup>1</sup>



- Eliminated or reduced price supports.
- Limited consumer subsidies for specific basic foods and changed their programs to direct payments to low income consumers.
- Unified exchange rates, although some currencies are still considered to be overvalued.
- Agreed to end import bans and import licensing, with tariffs taking the place of outright bans and other import restrictions.
- Joined GATT, which set up additional constraints on trade policy.

### **Implications of Reform**

Because of debt restructuring and major changes in policies, Latin American economies moved forward in the early 1990's. Economic activity in Latin America and the Caribbean grew by 3.2 percent in 1993, extending the moderate recovery that began in 1991. Per capita output also increased for the third consecutive year. Most Latin American countries shared in the economic revival. Chile registered near-double-digit growth in some years. The economies of Haiti, Cuba, and Suriname, examples of countries resistant to market reform, continued to perform poorly.

Latin America and the Caribbean economies, however, are still attempting to pull out of the crisis of the early 1980's, and on average still operate at the 1978 level of economic activity as measured by total and per-capita GDP. This poor economic performance was induced by the borrowing strategies of the Latin American countries, combined with stifling economic policies.

Agricultural production growth in Latin America has outpaced population growth, in general. Production growth currently lags for a few products, but that is primarily because world food supplies of these products exceed demand, and international prices for those commodities are well below their 1980 levels.

A few Western Hemisphere countries have seen their agriculture sectors decline, either because of comparative advantage of other enterprises or policy regimes that are detrimental to agriculture. Some countries deliberately limit agricultural production as part of their overall price and income support policy. The United States, for example, uses ARP to control grain output. Production quotas and levies are used to regulate Canada's dairy and poultry sector, and delivery quotas are used to regulate wheat and barley marketings in Canada.

**Definitions: PSE's combine the estimated value of benefits from various policies into one indicator--the total value of transfers--which is the sum of the following individual measures, from income supports through economy-wide policies**

**Income support**--Direct income payments to producers, including benefits from government programs affecting per unit returns as long as they do not directly increase market prices to consumers. For example, U.S. deficiency payments, net crop insurance benefits, and U.S. marketing loan payments, are included.

**Price intervention**--Producer benefits from programs that cause a difference between domestic market prices and world market prices, such as import quotas, tariffs, and export subsidies.

**Input assistance**--Producer benefits from programs that reduce the cost of credit and other inputs used in the agricultural production process.

**Marketing assistance**--Producer benefits from programs that reduce agricultural marketing and processing costs, including storage and transportation subsidies.

**Infrastructure**--Producer benefits from programs that have long-run implications for the productivity or structure of the agricultural production sector, including research and extension and land development projects.

**Regional support**--Producer benefits from various programs of State, provincial, or other subnational governments.

**Economy-wide policies**--Producer benefits from programs not specific to agriculture, but which have significant and distinguishable effects on the sector. For example, this category of support measures effects of exchange rate policies, income tax laws, and general transportation subsidies.

**Direct Payments**--A subtotal composed of income support, plus storage payments for the United States.

**Gross receipts**--Value of production plus direct payments.

**Percentage PSE**--Total value of transfers, divided by gross receipts.

Agricultural trade in the hemisphere is expected to increase in the 1990's relative to the 1980's when the picture was mixed, because of the effects of implementing the various regional free trade areas (FAO). The final effects of the free trade initiatives of the late 1980's have not yet been assessed. The success of the U.S.-Canadian Free Trade Agreement, however, appears to already be evidenced by the increase in trade between these two countries (see Sugar article).

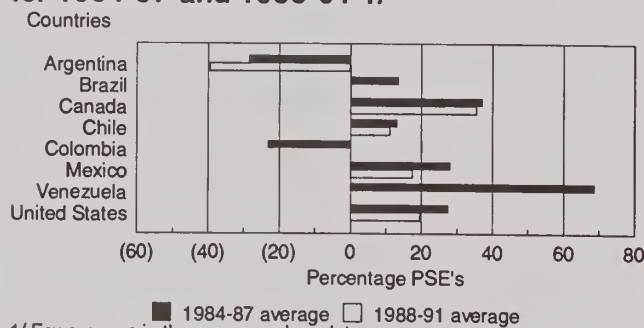
## Agricultural Subsidies and Policy Change

Agricultural subsidies are measured using Producer Subsidy Equivalents (PSE's), which can be expressed as the value of transfers to producers or as a percentage PSE (see box for definitions). The percentage PSE, used most in this article, shows the amount of transfers as a percentage of gross revenue from agricultural production and government payments. Those with the largest initial subsidies had the largest adjustments to make in changing to a market oriented economy in the domestic and trade sectors (figure 10.1). Venezuela had the highest PSE's--ranging in value from 45 percent to 75 percent during 1982-1987. Colombia and Argentina had negative PSE's (producers were taxed) and, therefore, the lowest PSE's in the Hemisphere. Mexico, Canada, Chile, and the United States had PSE's in the range of 10 to 40 percent in most years. Brazil's PSE exceeded 20 percent in 1985-86, but was lower in other years.

Venezuela stands out as the country with the highest subsidies, with a PSE in excess of 60 percent throughout 1982-87. More recent PSE information is not available, and many Venezuelan policies have been changed. Venezuela's agricultural policy goal before and after the 1989 reforms was to encourage domestic farm production and to reduce imports of farm products (import substitution). Major policy reforms since 1989 have probably reduced support for agriculture by eliminating import licensing and price controls, adopting a unified

Figure 10.1

### Western Hemisphere Average PSE's, for 1984-87 and 1988-91 1/



1/ Fewer years in the average when data are missing. No data for Brazil, Colombia or Venezuela for 1988-91.

## Definition of Price Bands

Price bands in Latin America refer to systems of import levies based on effective variable levies and ad valorem tariffs within a range of minimum and maximum prices set by the government.

Variable levies apply when world prices (adjusted to the country's c.i.f. price) are low, effectively supporting import prices at the minimum level of the price band. A constant ad valorem tariff applies when world prices are in a moderate to high range--within the price band. And when world prices are high, the ad valorem tariffs are reduced.

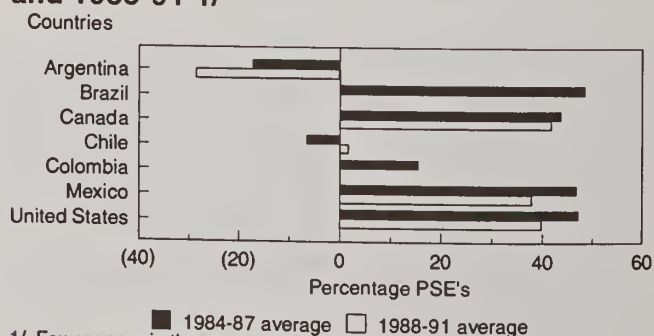
Price bands are of concern to the GATT because when world prices fall below the minimum import price, the effective import levy can potentially be much higher than the GATT-bound tariffs. The minimum import price and the ad valorem tariff of the price band are the two most critical elements of the price band system. The purpose of price bands is to protect domestic farm prices in the given country.

exchange rate, and reducing fertilizer and credit subsidies. But, a fixed tariff and surcharge above the ad valorem import tariff continued to discourage imports through use of a price band policy in 1991 (see box on price bands).

Argentina has taxed, rather than subsidized, its agricultural sector since 1984. The negative Argentina PSE's reflect the policy goal of discouraging agricultural production and shifting resources to other sectors to encourage economic growth. Wheat, corn, sorghum, and soybeans (figures 10.2-10.5) all had export taxes and negative PSE's nearly every year from 1984 to 1992. Agricultural policy has changed dramatically in the past 3 years, however. In recognition of the failure of the past approach, Argentina initiated policy

Figure 10.2

### Wheat: Average PSE's for 1984-87 and 1988-91 1/



1/ Fewer years in the average when data are missing. No Data for Brazil or Colombia in 1988-91.



Figure 10.3

**Corn: Average PSE's, 1984-87 and 1988-91 1/**

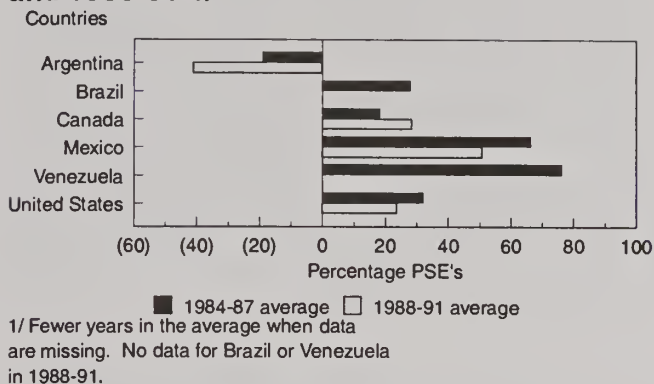


Figure 10.4

**Sorghum: Average PSE's 1984-87 and 1988-91 1/**

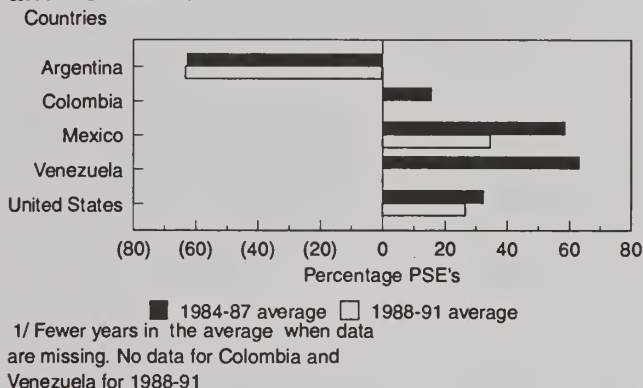
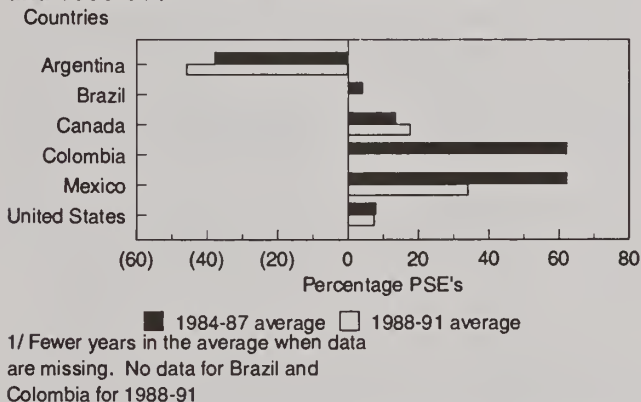


Figure 10.5

**Soybeans: Average PSE's 1984-87 and 1988-91 1/**



reform in 1991 to eliminate the taxation of agriculture. Near-zero PSE's in 1991 and 1992 reflect that policy shift.

Prior to 1990, farm income supports in Colombia were based on high internal prices assisted by import controls and input assistance. In early 1990, Colombia reduced agricultural subsidies and tariffs and reduced the effects of import licensing and foreign exchange controls. However,

the government quantitative restrictions on imports were replaced with price bands.

Colombia's coffee exports and other exportables were taxed heavily (the PSE was negative for coffee) as an important source of government revenue. The aggregate PSE in Colombia is negative because of the importance of coffee in the agricultural economy. However, Colombian rice and soybeans were subsidized in excess of 50 percent in most years during 1984 to 1987 (figures 10.5, 10.6). These two basic food commodities received such high support to assure adequate supplies of low cost food for low income consumers

Mexico's aggregate PSE exceeded 30 percent in 1986 and 1987, but subsequently declined to 13 percent in 1991. Corn and wheat PSE's remained relatively high through 1991--at 50 and 45 percent, respectively (figures 10.2, 10.3). Livestock PSE's, however, turned negative in 1991, due to changes in PSE's for beef, dairy, and eggs. An overvalued exchange rate in 1989-91 brought about negative transfers for the livestock sector (see economy wide policy PSE for the exchange rate effect, figure 10.7).

Figure 10.6

**Rice: Average PSE's 1984-87 and 1988-91 1/**

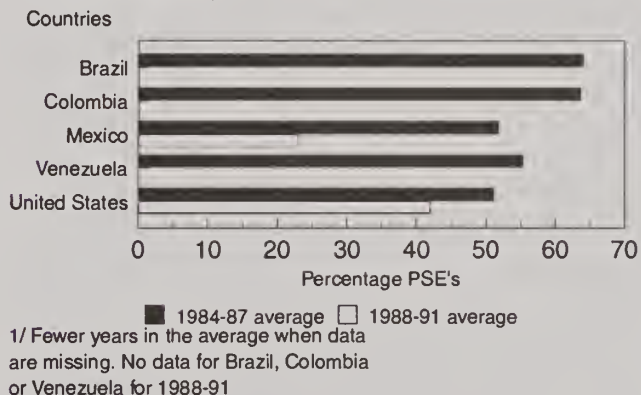
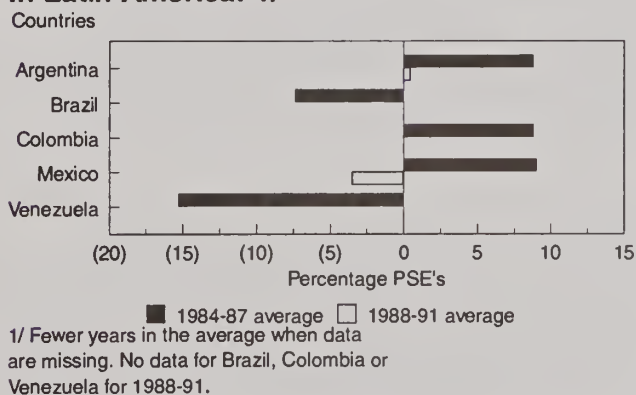


Figure 10.7

**Controlled Exchange Rate Effects on PSE's In Latin America. 1/**



Mexico's agricultural policy goals prior to 1987 included supporting farm income and assuring an adequate supply of low cost food to low income, largely urban consumers. Domestic agricultural production was encouraged by using high, guaranteed price supports, assisted by import controls and financial subsidies. Other subsidies were used to keep consumer prices low.

Policy reforms after 1987 moved Mexico toward a more market oriented policy. The reforms eliminated some foreign exchange controls, privatized some government enterprises, deregulated the land tenure system, reduced import restrictions, and substantially reduced agricultural subsidies. Direct payments were substituted for market price support starting in 1993, based on the new PROCAMPO program. Market price guarantees are being phased out. NAFTA, approved in 1993, calls for declining tariffs and tariffication of import bans and quotas affecting U.S.-Mexico and Canada-Mexico trade (for more details, see PROCAMPO article on Mexico).

Canada uses marketing boards, import restrictions, price and income stabilization programs, and transportation subsidies to protect its agriculture and increase returns to producers. Administered prices, import quotas, and production controls are used to support market prices for dairy and poultry. Grains producers receive benefits of direct income subsidies and transport subsidies under the Western Grain Transportation Act (WGTA). After increases in income support in 1992, government support for grains and oilseeds producers was reduced in 1993 due to smaller outlays for the Gross Revenue Insurance Plan and the WGTA.

The Canadian government is discussing changing the WGTA into a direct subsidy program to avoid the cuts prescribed by the GATT commitments to reduce export subsidies. The National Tripartite Stabilization Program for cattle and hog producers will be eliminated in 1994. Under the U.S.-Canada Free Trade Agreement, the Canadian requirement for import licenses on wheat and oats imports from the United States have been eliminated, but barley licenses are still required (see article on Canada).

Canada's aggregate PSE exceeded 30 percent during all of 1984-1993. The PSE decreased in 1992 and 1993 (preliminary 1993), falling to less than 34 percent. Agricultural subsidies are expected to decline again in 1994 as the Canadian government works to control budget deficits.

The United States agricultural policy uses direct payments, supply controls, subsidized loans, and market price intervention, assisted by import restrictions and export subsidies, in order to implement producer-oriented agricultural policies. Low income consumers also benefit from subsidized food programs. Minimum target price levels in the United States have been reduced and frozen

under the 1985 and 1990 Farm Bills. Fewer acres are eligible for payments now, but deficiency payments remain important as market prices rarely approach or exceed the target price. Crop loan-related benefits have been reduced the most, relative to the levels of support in the mid-80's. Crop loan rates per bushel are tied to a moving average of market prices, which can be reduced further by the Secretary of Agriculture, and the Farmer-owned Reserve was revised, so the government ends up owning less grain than when loan rates were not market sensitive. Interest rate subsidies on crop loans (based on below-market interest rates and interest forgiveness) are down since the volume of loans and loan defaults is reduced.

The United States aggregate PSE declined from the high of 32-34 percent during 1986-87 to 18-19 percent during 1989-93 (preliminary 1993). Both income support and price support-related benefits decreased from the highs of the mid-80's, primarily because world market prices recovered from the relative lows of the mid-80's. The U.S. dairy sector continues to have the largest dollar value of subsidies and the second highest percentage PSE--43 percent. Sugar had the highest percentage PSE in 1992--52 percent. The producer benefits related to price and income support programs continue to be important components of the U.S. PSE's for grains and poultry. The Export Enhancement Program (EEP) continues to be an important source of price intervention as the program is used to keep U.S. exports competitive in the world market.

The primary goal of Chile's current policy regime is to rely on open market-directed price signals to promote economic growth through the development of Chile's comparative advantages. Within this overall policy regime Chile levies an 11 percent "uniform" tariff on nearly all imports. A price band system for wheat, wheat flour, sugar, and vegetable oils uses a system of variable composite tariffs to establish floor and ceiling price levels for these commodities. Variations of the tariff approach can be used to address unfair import practices if imports are judged to be seriously injuring to a domestic industry.

Chile's trade policies provide implicit subsidies to its producers of oilseed, sugar beets and wheat. In relative terms vegetable oils have the highest PSEs. Percentage PSEs were greater than 42% for the entire 1987-1992 period. Sugar has the next highest PSEs in relative terms. Percentage PSEs were greater than 19% for the entire 1987-1992 period except 1990. Wheat has the lowest PSEs in relative terms with negative values during the 1987-1989 period. These negative values reflect the structure of Chile's wheat sector, with many small farmers (5-10 hectares) that have few production alternatives, and an inadequate infrastructure for exporting wheat.

Brazil followed a trade policy based on import substitution and market protection prior to 1990 when it made a



significant change in policy to revive economic performance. Reforms were made to dampen food price inflation and to provide price competition for domestic producers. The government privatized many enterprises. The government decontrolled prices in 1991 on nearly all items including food. Consumer subsidies and excess food stocks are still used to assist the poor. An intervention price program is used to provide a safety net for market prices and to provide buffer stocks and an import policy is used to control price run ups. Budget restraints often restrict the ability of the government to make the price floor effective. Credit policy is one of the most important policy tools used to subsidize agriculture, and this is facilitated by indexing credit provisions to commodity price changes.

Trade policy reforms for Brazil from 1991 to 1994 included lifting most nontariff barriers and reduced tariffs. Quantitative restrictions on wheat imports were relaxed, but licenses are still required. There were tariff reductions, but there was also some legislation to allow countervailing import duties on exports subsidized by other countries. Importers also have to pay various port fees and taxes that are quite high.

For Brazil, variation in support among the individual commodities is hidden in the aggregate PSE. Exportable commodities (soybeans, beef, and poultry) had variable and often negative PSE's. The 6-year (1982-87) average PSE for livestock was negative. There were high and more stable levels of support for the domestic market crops--wheat, rice, and corn (figures 10.2, 10.3, 10.6). The annual PSE's for these domestic crops exceeded 35 percent every year but two during 1982-87, reflecting the new priorities placed on domestic food production after the transition to a democracy in 1983 and after the civilian government took office in 1985.

## Summary of Current Policies

As the Western Hemisphere moves into the initial years of the Uruguay Round of the GATT and NAFTA, there is still significant government intervention. The policies of 27 Western Hemisphere countries are reviewed below. Trade, producer, and consumer policies in the region are summarized in table 10.1.

### Trade Policies:

**Import tariffs** have been reduced, but have been continued, in most countries. They have been a major source of revenue throughout Latin America. Membership in the GATT or any of the free trade areas throughout the Western Hemisphere has often called for tariff reduction. Tariffs in most countries are GATT-bound. Nicaragua and Panama, however, continue to have high ad valorem tariffs on agricultural imports. While most ad valorem tariffs have

been reduced, other import or value added taxes have been implemented.

Most of Central America and the Andean countries have introduced price bands, and CARICOM implemented Minimum External Tariffs that have the potential to be contentious in the GATT tariff bindings. In the case of price bands, most countries have a minimum import price at the lower bound of the price band, so the effective tariff may potentially exceed the GATT bound tariff.

**Export taxes** have been reduced or removed on most Latin American exports. A few holdovers at reduced rates appear in Argentina (soybeans), Mexico, Paraguay (soybeans), Uruguay, Dominican Republic (cocoa beans), Haiti, Colombia (coffee), Belize (sugar), and Honduras (bananas and coffee). Guatemala has export subsidies on coffee, and Dominican Republic has subsidies on coffee and rice. All Latin American countries have taxes on at least one major export.

**Marketing boards have a reduced role in exports.** Only a few, such as the Canadian Wheat Board, have continued to be the sole exporter of major agricultural products. Export license requirements have been removed in most countries. But export licenses are still required for Mexican coffee. Belize requires licenses for live animals, citrus fruit and beans, and Guatemala requires export licenses for tobacco. Costa Rica allows exports of rice and powdered milk only if there is surplus production.

**Import quotas** have often been converted to tariffication schemes anticipating requirements of the Uruguay Round rules. The U.S. converted its sugar quota into a tariff-rate quota system, but the dairy, cotton, and peanut import quotas continue to be used. The U.S. Meat Import Act of 1979 continues to provide for the establishment of meat import quotas (for beef, veal, mutton, and goat products) when estimated imports exceed 110 percent of a formula-derived quantity. Canada also has a meat import law, currently based on use of a tariff rate quota system. The U.S. and Canada have exempted each other from their respective meat import laws. Canada uses import licenses, but has dropped the wheat and oat license requirement on imports from the U.S., per the U.S.-Canada Free Trade Agreement. Canada still requires an import license for barley imported from the United States. Mexico, Jamaica, and the Dominican Republic require import licenses for most basic commodities. Trinidad and Tobago have an import quota on pork and El Salvador prohibits poultry imports.

**Government monopoly importing privileges** of parastatals have been curtailed in most of Latin America. Only Barbados and Nicaragua continue to have State monopolies that import (beans and rice). Multiple exchange rate regimes, which were popular in most of Latin America in

the early 1980's have been abandoned. However, Paraguay and Peru continue to have overvalued currencies.

#### **Producer Policies:**

**State owned enterprises** are no longer important in many countries and parastatals have limited roles. Nevertheless, the Canadian Wheat Board and Mexico's CONASUPO have dominant roles in buying and selling agricultural products.

**Minimum price support programs** have been discontinued in many countries, although the United States and Canada price support programs continue to be important. Mexico's PROCAMPO program, implemented in 1993, replaced the old price support program (see box in PROCAMPO article).

**Farm credit at subsidized interest rates** has been a popular farm subsidy program in Latin America, the United States, and Canada. Several countries have dissolved farm credit banks because of undercapitalization and heavy financial losses. Farm credit at subsidized interest rates is still available in the United States, Canada, Paraguay, Dominican Republic, Trinidad and Tobago, Costa Rica (for small producers), Honduras, and Nicaragua.

#### **Consumer Policies:**

**Domestic food price control by parastatals has been reduced.** Most countries, however, still have state food processing plants or marketing organizations.

Food subsidies and price controls have been removed by many countries, and instead target programs specifically for needy families. In Mexico, CONASUPO subsidizes some food processors to keep prices low. Bread and milk prices are controlled along the whole marketing chain in Uruguay,

and bread and flour prices are controlled in Guatemala. The Food Stamp and other related programs in the United States continue to be important sources of assistance for low income people. Food programs accounted for 56 percent of USDA's total budget in 1993.

Many countries have a basket of basic foods with controlled prices. Trinidad and Tobago, Belize, Costa Rica, and Haiti follow this approach. Mexico has targeted programs for low income families through a food stamp type program for corn tortillas. Mexico and Honduras have retail stores that target subsidies to low income families by selling basic products at below market prices.

#### **FOOTNOTES:**

1/ Parastatals are quasi government agencies that buy, sell and store commodities and often have monopoly power to import and export commodities.

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Table 10.1  
Agricultural policies in the Western Hemisphere, 1992 to present <sup>1/</sup>

Country	Trade policies	Producer and input policies	Consumer policies
United States	Tariffs. Quota/tariff rate quotas on dairy products, peanuts, sugar, and cotton. Meat import restrictions can apply. Export subsidies through Export Enhancement Program.	CCC makes direct payments, and commodity loans and purchases to program participants. Participation often requires idling cropland. Interest subsidies, crop insurance, and disaster payments programs.	Food Stamp, School Lunch, and Women, Infants, and Children programs provide food supplements and financial assistance to help needy.
Canada	Tariffs. Import quotas and/or licenses required for poultry, dairy, or grain imports. Meat tariff rate quota may apply. Rail subsidies to exporters. CWB has monopoly on wheat and barley exports.	Administered prices, marketing boards, direct payments, and crop insurance provided to grains, oilseeds, dairy, and poultry. Subsidies for transportation, marketing, interest rates, and inputs. CWB controls access to grain handling. Dairy and poultry production quotas.	
Mexico	Tariffs for NAFTA. Non-NAFTA tariffs of 0-20 percent. Import quotas for dairy, oilseeds, beer, wine. Import licenses for corn, wheat, barley, malt, dry beans, poultry, eggs, nonfat dry milk, fresh cheese, table grapes, and potatoes. NAFTA replaces import licenses with tariff rate quotas. Price band for sugar. CONASUPO is monopoly importer of powdered milk. Export licenses on coffee. Export drawbacks. <sup>2/</sup>	PROCAMPO direct payments are replacing price supports. Agreement prices and guaranteed prices are being phased out during 1994 and 1995. Fixed payments per acre are provided for corn, beans, wheat, rice, soybeans, safflower, barley, and sorghum.	CONASUPO controls prices of corn and dairy products, and provides subsidies to processors for yellow corn tortillas. Food stamps for the low income consumer through PRONASOL.
South America			
Argentina	A 2.5 percent import tariff. Export tax of 3.5 percent on oilseeds. Export rebates.	National Food Supply buys and sells agricultural products. Minimum producer prices. The state controlled sugar sector. Interest rate subsidies.	Targeted food subsidy programs. Buffer stocks to keep consumer prices for food from increasing too rapidly.
Brazil	Aggressive devaluation to encourage exports. Export drawbacks on soybean products.		

continued

Table 10.1  
Agricultural policies in the Western Hemisphere, 1992 to present 1/ (continued)

Countries	Trade policies	Producer and input policies	Consumer policies
South America			
Venezuela	Declining tariffs to harmonize with Andean Pact Common External Tariff. Value added tax on imported feed- grains and soybean meal. Price bands. 3/ Phytosanitary certificates. Export rebate on cocoa beans. Crawling peg exchange rate regime.	Minimum prices for white corn, copra, and coffee. Subsidies on irrigation, fertilizer, credit, and electricity. Farmers exempt from income tax.	Controlled prices on sardines. Direct subsidies targeted to low income groups.
Colombia	Agricultural imports subject to 14 percent domestic sales tax. Price bands. IDEMA imports some of the wheat and barley. Domestic crop used before imports are allowed. Phytosanitary regulations. Coffee export taxes, quotas, and tax credit certificates. Multiple currency practices resulting from taxes on profits and income remittances.	Caja Agraria sells inputs to small farmers, and lends to small farmers at a subsidized rate.	
Peru	A 15 percent import tariff on basic commodities. Price bands. Overvalued currency.		
Uruguay	A 6 percent ad valorem import tax. Crawling peg exchange rate. A 5 percent export tax. Export rebates.	DNCA controls sunflowerseed and CONAPOLE controls milk. Controlled prices on bread and milk. The State controls the sugar, alcohol, alcoholic beverage, milk, and fertilizer industries.	Controlled prices for milk and bread.
Ecuador	Tariffs in the range of 5-20 percent. Price bands. Wine taxes. Wheat import quotas. Approval needed for oilseed meal imports. Exchange rate controls Phytosanitary regulations.	The Government owns the AZTRA sugar mill.	

Continued.



Table 10.1  
Agricultural policies in the Western Hemisphere, 1992 to present 1/ (continued)

Countries	Trade policies	Producer and input policies	Consumers policies
Chile	Price bands for wheat, sugar.	COTRISA is government buying agency for wheat. Minimum producer prices for wheat, sugar, and edible oils.	
Bolivia	A 10 percent ad valorem uniform import tariff. Adopting Andean Pact Common External Tariff. Exchange rates determined by currency auction. Drawback scheme for exports.	Many publicly owned food processors and farms. State control of milk processing, poultry, cattle, chestnuts, seeds, oilseeds, com, and sugar.	
Caribbean			
Dominican Republic	Basic import duty of 3-35 percent on selected commodities, plus a protective surcharge and an valorem duty. INESPRE issues import licenses and import permits for selected commodities. Export taxes on cocoa beans. Export subsidies on coffee and rice. Currency overvalued; may have surcharge.	Price Control Commission sets wholesale prices for several commodities. CORDE controls flour mills, CEA controls sugar mills, and IAD oversees State owned lands. High support prices for rice, copra, and coffee. Small subsidy for milk producers. Banco Agrícola subsidizes credit but is undercapitalized.	INESPRE administers food donations. Government price controls on sugar, soybean oil, com, flour, and pinto beans.
Haiti	Import levies, licenses, tariffs, and quotas. Export taxes on coffee. Overvalued currency.	Subsidy to sugar producers. Rent subsidy.	Prices are controlled at a relatively low level, especially in urban areas.
Jamaica	Common External Tariff of CARICOM. Import quotas and licenses, negative lists. 4/ Soymeal/oil taxes. Chicken part tariffs. JCTC and Cocoa Industry Board import and export, but no longer are monopolies. Currency auction exchange rate regime.	Has minimum producer prices, and some parastatals. SIA controls all aspects of marketing system.	

Continued

Table 10.1

Agricultural policies in the Western Hemisphere, 1992 to present 1/

Countries	Trade policies	Producer and input policies	Consumer policies
United States	Tariffs. Quota/tariff rate quotas on dairy products, peanuts, sugar, and cotton. Meat import restrictions can apply. Export subsidies through Export Enhancement Program.	CCC makes direct payments, and commodity loans and purchases to program participants. Participation often requires idling cropland. Interest subsidies, crop insurance, and disaster payments programs.	Food Stamp, School Lunch, and Women, Infants, and Children programs provide food supplements and financial assistance to help needy.
Canada	Tariffs. Import quotas and/or licenses required for poultry, dairy, or grain imports. Meat tariff rate quota may apply. Rail subsidies to exporters. CWB has monopoly on wheat and barley exports.	Administered prices, marketing boards, direct payments, and crop insurance provided to grains, oilseeds, dairy, and poultry. Subsidies for transportation, marketing, interest rates, and inputs. CWB controls access to grain handling. Dairy and poultry production quotas.	
Mexico	Tariffs for NAFTA. Non-NAFTA tariffs of 0-20 percent. Import quotas for dairy, oilseeds, beer, wine. Import licenses for corn, wheat, barley, malt, dry beans, poultry, eggs, nonfat dry milk, fresh cheese, table grapes, and potatoes. NAFTA replaces import licenses with tariff rate quotas. Price band for sugar. CONASUPO is monopoly importer of powdered milk. Export licenses on coffee. Export drawbacks. 2/	PROCAMPO direct payments are replacing price supports. Agreement prices and guaranteed prices are being phased out during 1994 and 1995. Fixed payments per acre are provided for corn, beans, wheat, rice, soybeans, safflower, barley, and sorghum.	CONASUPO controls prices of corn and dairy products, and provides subsidies to processors for yellow corn tortillas. Food stamps for the low income consumer through PRONASOL.
South America			
Argentina	A 2.5 percent import tariff. Export tax of 3.5 percent on oilseeds. Export rebates.		
Brazil	Aggressive devaluation to encourage exports. Export drawbacks on soybean products.	National Food Supply buys and sells agricultural products. Minimum producer prices. The state controlled sugar sector. Interest rate subsidies.	Targeted food subsidy programs. Buffer stocks to keep consumer prices for food from increasing too rapidly.

Continued



Table 10.1  
Agricultural policies in the Western Hemisphere, 1992 to present 1/ (continued)

Countries	Trade policies	Producer and input policies	Consumer policies
Central America (continued)			
Guatemala	Import tariff on tobacco and sugar. Import licenses for wheat, tallow, poultry, and sugar. Price band on yellow corn, milled rice, rough rice, and sugar. Export subsidy on coffee. Export licenses for tobacco.	National Wheat Guild controls the wheat market. Sugar and wheat have price controls. Tobacco farmers must have planting permits.	
Honduras	A 5-20 percent tariff plus surtax, and special import taxes on vegetable oils. Corn, rice, seedstock, livestock, agricultural chemicals, livestock feed, and medicine imports must be approved. Phytosanitary requirements. Price bands. Export taxes on bananas and coffee. Devaluation of lempira.	Honduran Agricultural Marketing Institute (IHMA) maintains some control over basic foodstuffs. Agricultural Development Bank, BANADESA, is part owner of one sugar mill, has a role in importing and distributing fertilizers, and channels investment into agriculture.	BANDASUPRO retail stores for lower income persons.
Nicaragua	Rice, sorghum, corn, wheat, and beans have ad valorem tax plus stamp tax. A 250 percent tax on chicken parts imports, and 45 percent ad valorem tax on whole chicken imports. ENIMPORT imports rice, and ENABAS imports dry beans and rice. Price band on rice, corn, and sorghum. Coffee exports through ENCAFE. Inputs used to produce exports are exempt from 15 percent value added tax.	Empresa Nicaraguanese de Granos Basicos is still in existence but its role has been reduced. Sugar prices are controlled. The Nicaraguan Investment Fund gives financial assistance to the beef and dairy industries.	
Panama	Tariffs lowered to 60-90 percent on agroindustrial products. Minimum import price and ad valorem tax on corn and rice, potatoes, onions, beans, green peas, and sorghum. Import permits required for chickens. Export drawbacks.		

Footnotes for Table 1:

- 1/ Names and acronyms for various government agencies and for the NAFTA are shown fully capitalized.
- 2/ Drawbacks provide incentives to export through transfers equal to the value of duties or tariffs paid on the same product or on the original raw commodity.
- 3/ Price bands are used by countries to reduce price variability and/or assure that imports enter at a predetermined minimum price. May involve the equivalent of import duties or tariffs. Government stockholding may be part of the program.
- 4/ Negative lists are lists of commodities whose import may be banned, or that may require import licenses.

## The Effect of Regional Health-Related Restrictions on Western Hemisphere Trade

***Regionalization of health-related trade restrictions will likely preserve existing U.S. trade flows and can soften the adverse impacts of trade disruptions when an agricultural disease outbreak occurs in a limited region of the U.S. Drawbacks to regionalization center mainly around new domestic competition and, in export markets, from countries previously banned due to disease. This could be a positive opportunity for Argentina and other livestock exporting countries of South America, if U.S. import markets open up. Importers of U.S. livestock products also benefit from market preservation in the event of U.S. livestock disease outbreak. [W.Terry Disney]***

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Sanitary and phytosanitary (SPS) provisions of the GATT/Uruguay Round propose an area-within-a-country approach to establishing health-related trade restrictions. This concept, known as regionalization, would permit exports from a specific area if the country could demonstrate that the area was and is likely to remain free of a pest or disease, even if other areas of the country are not free of the pest or disease.

Currently under the GATT, member countries have the right to adopt any measure deemed necessary to protect human, animal, or plant health. This vagueness in the current language has often allowed countries to arbitrarily restrict trade due to restrictions not really related to health protection. Japan's recent ban of U.S. apple imports is a possible example of such non-health-related trade restrictions, which frustrated U.S. apple producers and trade representatives. The presence of a new apple disease or pest in U.S. apple exports was Japan's stated reason for banning all U.S. apple imports. Before that, Japan had banned U.S. apple imports for a bacterial blight and then the codling moth in certain very limited areas of the U.S. Recently, Japan has appeared to be easing these non-tariff barriers with a removal of New Zealand apple imports ban and the promise of lifting the U.S. ban next summer.

Virtually all GATT member countries, including the United States, support the need for a change in the existing GATT rules regarding health-related trade restrictions.

Under the SPS text of the Final Act of the GATT/Uruguay Round, signatory countries will be allowed to adopt their own food safety and animal health standards, or they will be allowed to adopt international standards. If a country elects to adopt its own standards, the SPS text requires that health-related measures be based on science.

International scientific organizations involved in establishing international criteria for SPS standards are the Codex Alimentarius Commission (CODEX), the International Office of Epizootics (OIE), and the International Plant Protection Convention (IPPC). Harmonization of SPS regulations to standards developed by these organizations will be encouraged.

USDA's Animal and Plant Health Inspection Service (APHIS) is responsible for establishing U.S. criteria under which imports will be allowed from areas of a country where imports were previously prohibited. Criteria established will include the ability to access a country's veterinary infrastructure and disease control capabilities, its surveillance and monitoring systems, and its animal import policies. APHIS is also responsible for quarantine and control over any disease outbreak inside the U.S. to insure importers that U.S. agricultural products meet OIE international guidelines.

Historical law and policies in the United States and most other Western Hemisphere countries have not distinguished disease-free areas within countries known to be infected with certain animal and plant diseases. Either a country was infected or it was not. Consequently, USDA often prohibited or severely restricted the importation of plant and animal products from an affected country.

Current U.S. plant health regulations being enforced by APHIS already recognize the concept of regionalization. Since pest-free areas are already embedded in USDA regulations and practices, no major disruptions from status quo trade in plant product imports into the U.S. should occur. However, the application of regionalization to some U.S. animal health trade restrictions requires legislative change. Specifically, the 1930 Tariff Act prohibited the import of fresh meat or livestock products from areas contaminated by common livestock diseases such as either foot-and-mouth disease or rinderpest. The



1993 NAFTA agreement altered the Statute of the 1930 Tariff Act, giving the Secretary of Agriculture authority to determine the terms and conditions for allowing trade in animals and products from disease-free areas in other countries besides Mexico, including countries where foot-and-mouth disease or rinderpest may exist.

Most Western Hemisphere countries that are GATT signatories are expected to follow closely APHIS guidelines consistent with OIE standards for regionalization criteria. Still, some countries may continue to ban U.S. exports for non-health related reasons (Japanese restrictions on rice imports, for example). Most countries protect select domestic industries from imports. Trade restrictions for health-related reasons will have to be based on science in the future.

The effect of regionalization depends on the specific criteria currently being developed by APHIS in the U.S. and counterparts in other Western Hemisphere countries, such as SENASA--the animal health agency for Argentina. The adoption of a regionalization strategy should free-up trade which had been impeded by restrictions based on other than health-related reasons. If that is the case, then the volume of Western Hemisphere trade in agricultural products should increase.

Many factors could affect the amount of trade increase. The emergence of Western Hemisphere bilateral and multilateral trade agreements, such as NAFTA and MERCOSUR, when combined with regionalization, could mean that importing countries within the hemisphere become more dependant on each other for their import needs -- and less upon outside suppliers.

Two specific examples of animal disease-based trade restrictions that could be lessened under regionalization criteria have been frequently discussed. These current trade restrictions involve the U.S. and other Western Hemisphere countries, and thus their elimination through adoption of regionalization stands to increase Western Hemisphere trade. These two examples are the possibility of fresh beef imports to the U.S. from Argentina or other South American countries, and the ability, under regionalization, to maintain U.S. export markets for broilers, if there was a domestic poultry disease outbreak.

### **Beef Imports from South America**

Argentina has a long-standing petition with APHIS to have its Patagonia region declared foot-and-mouth disease free, so that the region could export fresh beef to the U.S. Currently, due to the presence of foot-and-mouth disease in South America, the U.S. allows only cooked beef to be imported from Argentina.<sup>1</sup>

Under concessions of the bilateral market access negotiations for the GATT/Uruguay round, the U.S. has agreed in principle to import at least 20,000 metric tons of fresh, chilled, or frozen beef from Argentina. The required changes to 1930 Tariff Act legislation were made as a part of the NAFTA legislation. The amended legislation will now allow USDA to honor regionalization provisions of the GATT agreement for all livestock and animal products, including foot-and-mouth disease and rinderpest.

If APHIS is able to establish the verifiable criteria for establishing livestock disease-free zones within previously banned countries, then a region of Argentina could be declared foot-and-mouth-disease-free. The bilateral concession made by the U.S. establishes no timeframe under which Argentine beef imports must be accepted. Actual trade hinges on verifiable criteria being first established and adhered to. The ability to export fresh beef in U.S. markets has important economic implications for Argentina, the U.S., Western Hemisphere, and world meat trade.

Although the Patagonia region probably has the highest likelihood of any region in Argentina for being recognized as foot-and-mouth-disease-free, Tronstad and Disney showed that Patagonia has less capacity to produce beef for exporting fresh beef products than other areas of Argentina, such as Gran Chaco.<sup>2</sup> Argentina currently exports fresh beef only into other foot-and-mouth disease positive countries (mostly in South America) and is forced to export lower-valued cooked beef into the U.S. market. Overall, Argentina's potential capacity for beef exports is substantial. In 1990 Argentina exported 317,535 metric tons of beef; a little over half as fresh beef (to the Middle East, Europe, and other South American countries). The U.S. imported 19 percent of Argentina's total beef exports in 1990; this cooked beef accounted for 6 percent of U.S. beef imports.

### **Broiler Exports from the U.S.**

Twice in the last 20 years (1983-84 and 1992-93), export markets for U.S. fresh broilers have been reduced due to outbreaks of Avian Influenza (AI) in limited areas of the Northeastern U.S. In 1984, for example, U.S. exports of fresh and frozen chicken were down 43 percent from 1981 exports of 758.6 million pounds.

Because other countries often follow the U.S. lead and restrict exports on a country-wide basis, the presence of the AI disease in a limited area of the U.S. resulted in many countries banning fresh broiler imports from the U.S.<sup>3</sup> Many Latin American countries, including Columbia and Venezuela, led the way in banning U.S. broilers during these outbreaks.

The regionalization strategy could have limited the quarantine to the affected region of the AI outbreak and allowed broiler exports to continue from other regions of the U.S. (in fact, where most U.S. broiler production occurs). Disney and Peters estimated regionalization would have resulted in only a 20-million-pound (1.3 percent) reduction in broiler exports -- saving U.S. producers \$338 million in net cash returns. The price-soothing effect on world broiler prices would have benefited broiler importing countries as well.

## Summary

Sanitary restrictions are an important non-price barrier to free trade in agricultural products across the world. A country's exports are only hurt, under current law, when the disease outbreak occurs domestically. Important foreign markets for U.S. agricultural product exports, such as the countries of the European Community and Japan, have used control of disease as a means of restricting U.S. imports. Under proposed regionalization with GATT, a country's export markets will be protected from limited regionalized domestic disease outbreaks -- as signatory countries agree to establish criteria for recognizing disease-free-zones. This should strengthen Western Hemisphere export markets for the U.S., Argentina, and other countries.

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<sup>1</sup>The Darrein Gap, separating South and Central America, has been commonly recognized as the buffer zone for trade in fresh beef. All countries south of the Darrein GAP have been considered foot-and-mouth disease positive (the U.S. recently recognized Chile as foot-and-mouth disease free), and thus restricted from exporting fresh beef to countries north of the Darrein GAP that are foot-and -mouth disease free.

<sup>2</sup> Several new outbreaks of foot-and-mouth disease were reported in the Province of Rio Negro as recently as January 1994 -- casting doubt about Argentina's animal health agency, SENASA's, ability to control and quarantine the occurrence of disease outbreak (a serious violation of probable APHIS criteria).

<sup>3</sup> During the second Avian Influenza outbreak, Argentina and Peru prohibited U.S. imports of fresh broilers only from affected Northeastern States.

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## Environmental and Sanitary and Phytosanitary Issues for Western Hemisphere Agriculture

***Concern over environmental quality and food safety is reflected in the provisions of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) and the North American Free Trade Agreement (NAFTA). However, the potential for disputes rooted in conflicts between the GATT and environmental laws and treaties is demonstrated by the U.S. production and import ban of methyl bromide, an important agricultural fumigant. These issues are important for the fruit and vegetable trade in the Western Hemisphere. [Howard McDowell and Steve Martinez]***

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United States and Western Hemisphere trade in agricultural and food products will be affected by GATT and NAFTA and environmental treaties outside of GATT. Trade is expected to be more competitive because of tariff and subsidy reductions, and from product standard regulations that limit import restrictions to those based on characteristics of the traded product itself and not on its production methods. On the other hand, the importance of environmental quality is reflected in GATT and NAFTA SPS provisions, the environmental provisions under the GATT agreements on standards and subsidies, and the NAFTA Environmental Agreement. The perceived performance of these agreements will affect the structure of any further free trade agreements in the Hemisphere and perhaps the inclusion of regulations addressing environmental quality and pollution in GATT.

Demonstrating the potential for conflict in U.S. fruit and vegetable trade is the U.S. phaseout of methyl bromide under the Clean Air Act, under which the U.S. complies with the Montreal Protocol on Substances that Deplete the Ozone Layer. The ban will directly affect U.S. production and trade in fruits and vegetables. Protocol parties will meet in 1995 to consider its further action. There remains some possibility that the U.S. will have banned a substance that is still in use elsewhere, potentially placing U.S. producers in direct competition with producers with access to methyl bromide. If the U.S. were to ban the importation of products treated with methyl bromide, it is likely that a trade dispute would follow. Thus, GATT is providing incentives for expanding trade that could increase the likelihood of conflict with environmental treaties and laws. This could lead to further institutional development resulting from trade disputes caused by conflicts between diverging national interests in freer trade and environmental quality.

### GATT Environmental Regulations

The Uruguay Round GATT agreement, yet to be ratified, establishes the World Trade Organization (WTO), under

which the 1947 GATT Articles and the separate Tokyo Round agreements, along with a new SPS agreement, have been brought together with a common and more decisive dispute settlement procedure. GATT institutions pertinent to environmental regulations include exceptions under Article XX and the codes negotiated in the Tokyo Round addressing nontariff barriers. The GATT does not expressly authorize or regulate measures for environmental protection, but GATT Article XX provides general exceptions to GATT rules. Certain objectives, such as the protection of the environment or health and safety, are embodied in domestic policies and, therefore, have been shielded from global negotiations to some degree, creating the potential for protectionist abuse. This potential, in part, led to the negotiation in the Tokyo Round (1973-79) of several separate agreements or codes that deal explicitly with nontariff barriers. The success of the GATT in reducing trade barriers by converting nontariff barriers to tariffs and by reducing tariffs is likely to place increased pressure on the use and interpretation of Article XX in the absence of further GATT agreement concerning the environment.

The codes extend GATT articles with more specific rules and procedures while maintaining the GATT principles: 1) nondiscrimination, 2) using tariffs rather than less transparent measures, 3) sanctioning measures against unfair trade, and 4) surveillance and consultation regarding restrictive actions [17; 7, pp.52-57]. The new comprehensive Dispute Settlement Understanding giving greater power to the GATT is of major importance. The Sanitary and Phytosanitary Agreement allows for the control of imports in the interest of protecting a nation's animal and plant species from diseases or pests. The Standards Code limits the ability to restrict imports on characteristics other than those of the product, particularly production methods. Subsidizing the internalization of production costs now externalized to the environment is addressed in the Subsidies Code. The Agriculture Agreement provides for making payments for meeting

requirements under a well-defined conservation and environmental program.

## **GATT Dispute Settlement**

Dispute settlement in GATT has evolved from a general set of concepts into a newly negotiated code for the entire GATT. Dispute settlement, authorized under Article XXIII, has three key features [7]. First, dispute settlement processes are invoked on the grounds of nullification and impairment of benefits expected from GATT by a member. Second, GATT members are given power to investigate and give a ruling on the matter. Third, power is given to the members of GATT to authorize a member to suspend GATT obligations to other members. In earlier years, disputes were addressed in working parties of representatives of the various countries. Since around 1955, GATT dispute panels have been appointed to impartially arbitrate a decision as to the facts and an interpretation of the GATT rules.

The Tokyo Round addressed dispute settlement through the Understanding Regarding Notification, Consultation, Dispute Settlement and Surveillance. In addition to the understanding, several GATT codes negotiated in the Tokyo Round have their own dispute settlement procedures. The requirement of consensus among the GATT membership to approve a panel report has resulted in the possibility of the losing party blocking or delaying approval of the panel decision. This resulted in an ineffective dispute settlement process and led to a new understanding negotiated in the Uruguay round.

The Uruguay Round Dispute Settlement Understanding expedites the settlement process with a clear procedural schedule and requires that the panel report be adopted unless it is rejected by consensus by GATT members present at the meeting when the decision is made. Key elements of the understanding include the following. The agreement establishing the WTO provides for a General Council of representatives of all members. This Council will serve as Dispute Settlement Body (DSB) with the authority to establish panels, adopt panel and appellate body reports, and authorize suspension of concessions and obligations under the agreements.

Panels are obliged to finish the investigation, provide a draft report for review and commentary by the parties, and provide a final report within 6 months. The final report will be adopted by the DSB within 60 days, unless the DSB decides by consensus not to adopt the report or a party to the dispute decides to appeal the decision. Appeals are limited to issues of law in the panel report and legal interpretation developed by the panel. The Appellate Body may uphold, reverse, or modify the legal findings and conclusions of the panel. The appellate report will be adopted by the DSB and the parties, unless the DSB

## **Standards Code and Principles of Performance, Equivalency, and Proportionality**

The United States attempted to clarify and extend the principle of performance by proposing greater recognition of the principle of equivalency in the Uruguay Round. Article 2[8] of 1994 Agreement states, "Wherever appropriate, Members shall specify technical regulations based on product requirements in terms of performance rather than the design or descriptive characteristics. Article 2[7] of the 1994 Agreement states, "Members shall give positive consideration to accepting as equivalent technical regulations of other Members, even if these regulations differ from their own, provided they are satisfied that these regulations adequately fulfil the objectives of their own regulations." The revision of Article 2[2] of the Standards Code incorporates the principle of proportionality which requires that adopted technical regulations shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfillment would create [12].

decides by consensus not to adopt the appellate report. Thus, the procedure provides for resolution of a dispute within a year and a half, which can be blocked only by consensus and not by a single country. If a country found in violation does not meet the terms of the panel report, the complaining country can invoke trade sanctions against that country.

The increased likelihood of the acceptance of a dispute panel report places a greater burden of responsibility on the process, including the choice of panelists and their actions. The finality of the process and the potential for actions that place GATT in conflict with other treaties and the laws of a critical mass of nations could be the catalyst for further change in GATT. The Sanitary and Phytosanitary Agreement in particular could provide a clear test of the procedure.

## **Sanitary and Phytosanitary Agreement**

The GATT SPS Agreement clarifies the use of GATT Article XX(b) in establishing sanitary and phytosanitary standards to protect human, animal, and plant life from pests, diseases, and risks from additives or contaminants. The SPS Agreement recognizes international SPS guidelines as acceptable standards, while allowing individual nations to establish more stringent guidelines based upon the risk of environmental damage and economic benefits and costs [11]. GATT members are obligated to cooperate with the Codex Alimentarius Commission, the International Office of Epizootics, and organizations under the International Plant



Protection Convention, for the development and review of SPS standards, guidelines and recommendations (Paragraph 12). Nations whose SPS measures conform to the international recommendations are presumed to be consistent with GATT (Paragraph 10). However, paragraph 11 states that a member may require higher levels of protection if it determines from its own scientific risk assessment that the international SPS standards, etc., "are not sufficient to achieve its appropriate level of protection."

Measures must be nondiscriminatory among nations where similar conditions prevail (Paragraph 7), must accept as equivalent those measures that can be demonstrated as meeting an importer's SPS protection level (Paragraph 14), and must provide transparency through adequate notification and consultation (Paragraph 27 and Annex B). Developing countries may be provided with technical assistance (monetary credits, donations, or grants); and may be provided with longer phase-in periods and the possibility of exceptions to the Agreement. Disputes will be settled in accordance with the WTO Dispute Settlement Agreement, and at the request of the panel or the parties involved, a technical advisory group or the relevant international organization will be consulted.

A provision of major importance, known as regionalization (Paragraphs 24-26), requires members to adapt their SPS measures to the characteristics of the region, country or area within a country, from which a product originates or to which it is destined. (See "The Effect of Regional Health-Related Trade Restrictions on Western Hemisphere Trade" in this report.) Further, recognition must be given to the concepts of areas free of pests or diseases and areas of low prevalence of pests and diseases, with a system of determining such conditions based upon the natural characteristics and regulatory system of the region.

Reflecting the element of uncertainty and insufficient information associated with SPS problems, Paragraph 22 provides for the provisional adoption of SPS measures on the basis of available information, while additional information necessary for a more objective assessment of risk is pursued. Within a system that establishes minimum SPS standards and guidelines through the pertinent international organizations, paragraphs 22 and 11 appear to allow nations to establish more stringent SPS measures, within a transparent and nondiscriminating framework. The performance and responses of the system to a series of disputes will be of extreme interest.

### **GATT Standards Code**

The Agreement on Technical Barriers to Trade, known as the Standards Code, was established by the GATT Tokyo Round to address trade interference from national regulations designed to achieve environmental objectives and protect health and safety. The Code applies to all

products, including agricultural products, but does not apply to sanitary and phytosanitary measures. The Codes' objectives are to increase international cooperation through notification and consultation procedures, recognize certificates of conformity, and create dispute settlement procedures [18]. The Code permits national standards to deviate from and exceed international standards for various reasons, and protection of the environment is given as an explicit example. Therefore, deviations from international standards can, in principle, be justified on environmental grounds and are subject to Code provisions such as transparency and dispute settlement. The Code's orientation is strictly with standards and regulations for the characteristics or performance of the end products, with the intention of preventing discrimination against foreign producers on the basis of their use of non-approved production and processing methods.

Since the Standards Code deals only with standards and regulations in terms of the performance of the end product, it appears that product standards on environmental quality and the product itself could be legitimate for trade restrictive technical regulations set by a member, but that standards for production or processing methods would not be. The amended code is extended to cover standards which reference production methods, such as the use of growth hormones and pesticides, to prevent their potential abuse as technical barriers to trade [27]. Measures that could restrict imports would need justification.

### **GATT Subsidies Code**

The GATT Subsidies and Countervailing Measures Agreement (Subsidies Code) was designed to eliminate the adverse effects of export subsidies and to prohibit export subsidies on nonprimary products. Importers and competing exporters affected by export subsidies may retaliate with countervailing measures, provided they are able to demonstrate the existence of a subsidy, injury to the affected domestic industry, and a causal link between the two. The Subsidies Code has made countervailing measures more transparent. However, the Subsidies Code has been plagued by disputes and lack of consensus caused by vague definition and varied interpretation of nonactionable subsidies. These problems reflect a lack of consensus rather than difficulties with its dispute settlement process [17]. Uruguay Round changes in the Code and in the agriculture and dispute settlement agreements may have adequately addressed these difficulties.

The Subsidies Code defines nonactionable subsidies as those related, under certain conditions, to environmental protection, research and development, structural adjustment assistance, and regional aids [13]. Nonactionable subsidies are payments governments can offer industry without running the risk of having countervailing duties imposed on products by importing countries. Nonactionable

environmental subsidies in GATT 1994 include a one-time assistance to firms of 20 percent of the cost of adaption to new environmental regulations. Payments are linked to emission reductions required by law, addressing new entrants and existing firms. Thus, the subsidy is equivalent to a purchase of existing, but soon to vanish, rights to pollute, and places existing firms on equal grounds with new in terms of capital costs. The environmental subsidies would allow a nation to subsidize its firms operating under higher costs because of environmental regulation. Such subsidies could be important in maintaining international price competitiveness of food and agricultural product firms in nations that require higher environmental standards.

## Agreement on Agriculture

The Uruguay Round Agreement on Agriculture is oriented towards reducing subsidies that are tied to the production, domestic consumption, and exporting of specific commodities [10]. Certain categories of domestic support are exempt from the domestic support commitments to reduce the Total Aggregate Measurement of Support (AMS). The exempt support must have no, or minimal trade distortion or production effects; be provided through a publicly funded program without consumer transfers; and have no price supporting effect. Payments under environmental programs are allowable if limited to the costs of complying with a well-defined government environmental or conservation program which includes specific conditions that must be met, including those related to production methods or inputs.

From the standpoint of developing more comprehensive policies addressing trade and the environment, the Agriculture Agreement is important. It recognizes in an international treaty, that domestic agricultural income support programs have resulted in market distortions, and it allows the redistribution of expenditures away from market distorting activities to financing public goods for which no market exists. Thus, prices for agricultural input factors will more likely reflect the prices generated by the commodities on the markets, providing for a more efficient allocation of resources in agriculture. Farmers may continue to receive payments, offsetting the loss of capital values in the land in transition to alternative agricultural production systems. However, unlike the Subsidies Code which specifies that subsidies be available one time and be associated with the adaption of new technology, agricultural environmental payments appear to be possible on a longer term basis.

## U.S.-Mexico Cooperation on Pesticides and NAFTA

NAFTA was signed into law on November 17, 1993. The Agreement facilitates trade among the U.S., Canada, and Mexico. NAFTA includes provisions for Sanitary and Phytosanitary Standards (Chapter 7) and the North

American Agreement on Environmental Cooperation, the supplemental Environmental Agreement. The Agreement continues the progress made in the area of pesticide standard harmonization that is important to U.S.-Mexico fruit and vegetable trade.

## Mexico and the United States Working to Harmonize Pesticide Standards

The cooperative effort by Mexico and the U.S. to address pesticide standards for produce imported into the U.S. predates the NAFTA agreement. Imports from Mexico account for over one-half of all U.S. fresh and frozen fruits and vegetables imported from all sources and for roughly 41 percent of total Mexican agricultural exports to the United States (table 12.1).

NAFTA may result in even greater U.S. fruit and vegetable imports from Mexico. Concern has been expressed that pesticide residue on Mexican produce may exceed U.S. limits.

The United States and Mexico have similar requirements for regulating pesticides, but differ in the way that they monitor for safe levels of residues on produce. In the United States, the Environmental Protection Agency (EPA), Food and Drug Administration (FDA), and the U.S. Department of Agriculture share responsibility for regulating pesticides to ensure that they do not pose an unreasonable risk to human health and the environment. EPA registers the pesticides and sets tolerances for pesticide residues that may remain on foods.<sup>1</sup> FDA monitors most food to make sure that pesticide residues do not exceed tolerances.<sup>2</sup> In Mexico, the Commission for the Control of the Production and Use of Pesticides, Fertilizers, and Toxic Substances (CICOPLAFEST) registers pesticides and sets tolerance levels. However, there is no government agency that enforces and monitors compliance with pesticide residue tolerances. Testing of the country's food supply for pesticides is done by the private sector.

An informal working group of U.S. and Mexican officials, established in May 1991, is discussing options and approaches for resolving differences in tolerances between the two countries. This first joint effort will clarify the size of the gap in pesticide tolerances and what can be done to

Table 12.1  
U.S. imports, calendar year 1992

Item	Value
	1000 dollars
Fruits and vegetables	
from Mexico	\$976,517
from all sources	\$1,910,045
Total agricultural imports from Mexico	\$2,372,215

Source: USDA, Economic Research Service



reduce these differences [26]. The United States and Mexico are also working to ensure the safety of U.S. imports through improved monitoring efforts. In the United States, FDA has a sampling program to monitor domestically grown produce and imported produce, and a special program to monitor pesticide residues in Mexican produce. This special program began in 1979 in response to increasing imports from Mexico and concerns about the safety of food imports from Mexico. Produce that violates U.S. tolerances is sent back to Mexico or destroyed.<sup>3</sup>

To help ensure the safety of produce, the Mexican government plans to establish a national laboratory system for testing residue levels in an effort to increase its monitoring capabilities [25, 26]. Currently there are 5 functioning laboratories with 11 planned. One lab is owned by the government and the rest are to be privately owned. In addition, some Mexican growers have adopted agricultural techniques that may help reduce pesticide use and residues.

### **NAFTA Sanitary-Phytosanitary Agreement**

The potential for further cooperation is provided by the NAFTA SPS agreement. The agreement is similar to the GATT agreement, having the same elements, including the recognition of regional disease- and pest-free zones. The NAFTA agreement may allow more stringent standards with less justification than the GATT. Article 724 states that each government decides "the level of protection of human, animal or plant life or health in the territory of a Party that the Party considers appropriate," and Article 712 allows governments to include measures more stringent than an international standards. Furthermore, NAFTA appears to be more oriented towards the importing country than GATT with respect to dispute settlement. As long as SPS measures are not applied in an arbitrary or unjustifiable manner, they can be as stringent as the country decides is appropriate based on its scientific risk assessment [13, pp.7-8].

### **NAFTA Environmental Agreement**

The North American Agreement on the Environment, the Environmental Agreement, recognizes, "the right of each Party to establish its own levels of domestic environmental protection and environmental development policies and priorities" (Article 3) [16]. Further provisions are to ensure the enforcement of each country's laws and provide for dispute settlement and enforcement in the form of a fine with the amount to be directed to enforcement of the law violated by the Party complained against (Part 5). The agreement does not apply to the harvest or exploitation of natural resources (Article 45). The nature of the environmental agreement, that each country enforce its own laws, implies that a critical informal agreement or consistency on the laws was obtained before the agreement

### **Methyl Bromide, the Montreal Protocol and the U.S. Clean Air Act**

The U.S. Environmental Protection Agency (EPA) ruled that methyl bromide production and importation in the U.S. will be frozen in 1994 at 1991 levels, with both production and importation phased out completely by the year 2001. The ruling enforced the Clean Air Act, under which the U.S. complies with the Montreal Protocol. Methyl bromide's Ozone Depletion Potential (ODP) is 0.7, in excess of the 0.2 lower limit for substances to be classified as class I Ozone Depleting Substances, requiring phase out within 7 years of listing. The action required under the Clean Air Act is more stringent than freezing methyl bromide production in 1995 at 1991 levels required by the Montreal Protocol. Protocol Parties could agree to ban production, but have not done so.

The U.S. ban on methyl bromide, a domestic action taken in the protection of the global atmosphere, raises several important issues with regard to the GATT regulations just negotiated. One issue is whether the U.S. can provide any relief for its producers that may find themselves in direct competition with foreign producers that can use it. The U.S. could try to ban imports of goods produced or shipped with the use of methyl bromide. GATT ruled against the U.S. in the similar tuna-dolphin dispute, and the GATT product standards and SPS regulations appear to favor the foreign producer.

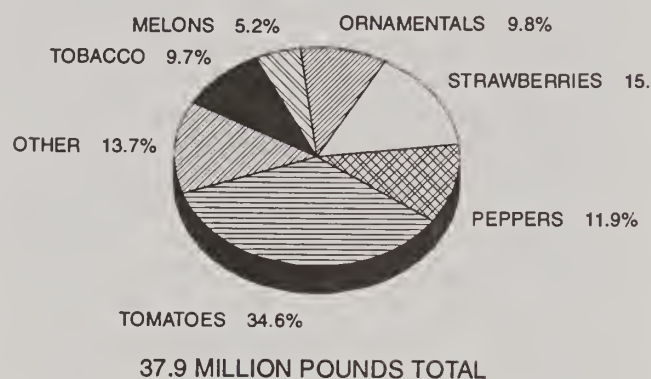
was negotiated. This sort of arrangement does not appear relevant for a multilateral agreement, but it could be a component of future free trade agreements.

### **Methyl Bromide Regulation and Fruit and Vegetable Trade in the Western Hemisphere**

Stricter regulation of methyl bromide (MBr) in the United States compared to other Montreal Protocol Parties could have important effects on certain agricultural sectors. Methyl Bromide (MBr) is used in agriculture as both a preplant soil fumigant and pre-shipment and import quarantine treatment for horticultural crops. The United States uses 15 percent of MBr for quarantine and pre-shipment treatment. For some commodities, U.S. imports treated with MBr at the port of entry comprise a large percentage of U.S. supplies during the winter. For grapes, peaches, nectarines, plums, and apricots, no USDA-approved alternatives to MBr treatment exist. Chile accounts for 96 percent of U.S. imports of these fruits during the winter months. If imports from Chile, the major affected country, are prohibited as a result of MBr cancellation<sup>4</sup>, the loss of

Figure 12.1

### Percent of Methyl Bromide Used on Specific Crops as a Soil Fumigant in the United States



the U.S. market could cost Chile as much as 91 percent (\$219 million) and 71 percent (\$35 million), respectively, of their export earnings on grapes and the stone fruits during the winter months. This represents roughly 71 percent and 44 percent of annual Chilean export earnings from grapes and the stone fruits.

Alternative quarantine treatments, such as cold treatment, and alternative technologies, such as irradiation, may be useful in keeping Chilean exports flowing to the United States. Forsythe and Evangelou [2] estimate that irradiation treatment cost would exceed methyl bromide fumigation cost by only 1 cent to 3 cents per pound of treated commodity depending on the cost of MBr treatment and whether grapes can be successfully irradiated.

Soil fumigation of horticultural crops accounts for approximately 80 percent of MBr use in the United States. The U.S. tomato and strawberry sectors are major users of MBr as a soil fumigant (figure 12.1). Mexico accounts for roughly 95 percent of U.S. imports of these commodities [24]. Losing MBr as a soil fumigant would lower yields and raise production costs for these crops as less effective and more expensive chemical alternatives to MBr are used. As a result, U.S. production of tomatoes and strawberries in the short run is estimated to fall by 27 and 17 percent, respectively [23].<sup>5</sup> This would encourage additional imports to help offset production losses in the United States<sup>6</sup>, while Mexico expands its exports. The value of Mexican net exports is estimated to increase by \$71 million (20 percent) with roughly 96 percent of the gain coming from additional tomato exports (table 12.2). U.S. net imports of tomatoes and strawberries is estimated to increase by \$404 million. In this case, regulatory changes foster additional trade, albeit at the expense of the U.S. net trade balance (exports minus imports) and domestic producers. U.S. producer net revenue is estimated to fall by \$356 million.

Table 12.2

Trade balance changes from replacing methyl bromide as a soil fumigant<sup>1</sup>

	United States <sup>2</sup>	Mexico
Trade value:	----- Million dollars -----	
Tomatoes	-355	68
Strawberries	-49	3
Total	-404	71
Trade volume:	----- 1000 Metric tons -----	
Tomatoes	-414	69
Strawberries	-52	2
Total	-466	71

<sup>1</sup>Results reported here are deviations from base values, which correspond to the average of observed values in calendar years 1989 and 1990.

<sup>2</sup>A minus sign indicates a decrease in net trade value (exports minus imports).

Source: USDA, Economic Research Service

### Implications and Conclusions for Agricultural Trade

NAFTA, and GATT if it is ratified, will result in reduced tariffs and subsidies affecting international trade generally and agricultural trade specifically. Agricultural firms operating in the U.S., the Western Hemisphere, and elsewhere, have incentives to increase exports and imports resulting from reduced tariffs. The possibilities of pest or disease free zones in the Caribbean, Central America, and South America may attract investment capital from local and multinational firms in search of profitable markets. Thus, the investment decisions for agricultural and food processing firms would be based more upon the economics of location and strength of consumer demand, location of supplies, and processing and transportation costs. Further, the NAFTA environmental agreement discourages countries from becoming pollution havens by tying national law enforcement to the dispute settlement process, limiting the effects on trade of regulatory differences and divergent environmental quality attitudes and enforcement.

GATT and NAFTA Sanitary and Phytosanitary Agreements use guidelines set by the pertinent international organizations as minimum standards, and countries may set higher standards. The reduction in tariffs and the setting of minimum standards provides incentives for nations to evaluate the economic feasibility of meeting export market standards under the regionalization provisions. The costs of public and mandated private actions necessary for pest or disease control or eradication can be compared with expected revenues from increased exports, which increase with tariff reductions. Thus, from the standpoint of consumer product standards, clear progress may have been made in providing market access through the reduction in tariffs and arbitrary SPS barriers while maintaining national sovereignty in setting standards based upon scientific risk



assessment studies. These changes work to the advantage of exporting producers.

The progress made on the production side of the market, particularly with regard to the effects on the environment of processing and production methods, is less clear. The NAFTA environmental agreement provides for a firm achieving dispute settlement concerning the enforcement of environmental laws in a competitor's country. The implication is that agreement has been achieved as to the sufficiency of each country's laws. Such an agreement would be more difficult for the GATT. The GATT does, however, allow for subsidies to be made for investment in environmental abatement on a one time basis in the subsidies code, and for environmental and conservation payments in the agricultural sector.

Trade officials from the U.S. and other countries agreed to begin discussing ways to address conflicts between freer trade and protecting the environment and wildlife [1]. The GATT members followed by approving the Decision on Trade and the Environment, setting up such a committee within the WTO. The case of methyl bromide serves as a relevant example for illustrating the conflicts. U.S. producers could be in direct competition with producers using a subsistence that is banned in the U.S. It can be imagined that methyl bromide could be a factor in a competing nation achieving regional pest-free status. More likely is its continued use as a fumigant for shipments destined for the U.S. with an expanded export demand resulting from the ban.

The GATT Standards Code, more clearly oriented towards product performance standards, appears to be of little help in applying a protective tariff. The U.S. could ban imports under GATT Article III requiring national treatment, and in exception to GATT rules under Article XX(b) to protect human, animal, or plant life or health, and under Article XX(g) relating to the conservation of natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption. The U.S. used these arguments in banning the imports of tuna caught with methods that killed dolphins at a rate that violated the Marine Mammal Protection Act.

Mexico called for a GATT dispute panel, which in a preliminary decision, ruled against the U.S. on August 16, 1991. The dispute was settled with changes pledged by the U.S. and Mexico, requesting that the GATT Council postpone the final decision. In a second dispute panel, called for by the European Union, the GATT ruled against the U.S. on May 20, 1994. The panel ruled against trade bans based on production methods. Further, there is objection on the part of public interest groups to their exclusion from access to hearings by the new dispute panels under the WTO [1].

In closing, sanitary and phytosanitary agreements have been negotiated and some environmental measures have been included in other GATT agreements, while continuing to open up trade. Key to the success of the SPS Codes are the functioning of the dispute panels, whose power is much enhanced under the Uruguay Round understanding. Furthermore, the GATT clearly is confronted with sources of conflict with environmental treaties and the laws of nations. Depending on what happens over the next several years, it is possible that agricultural uses of methyl bromide could be among the cases that provide incentives to continue development of GATT institutions addressing trade and the environment.

<sup>1</sup>Tolerances are pesticide residue limits that are permitted on foods. Pesticides cannot be registered for use on a particular food until a tolerance level has been set by the EPA.

<sup>2</sup>For meat, poultry, and eggs, USDA is responsible for monitoring tolerances.

<sup>3</sup>FDA's testing shows that the Mexican violation rate is generally higher than the violation rate for domestic produce. From 1979 to 1991 violation rates were found to be about twice as high for Mexican produce compared to domestic produce.

<sup>4</sup>For further details on the Montreal Protocol and GATT and on MBr use as an import quarantine treatment see Forsythe and McDowell.

<sup>5</sup>The reductions in production assume that less effective chemical alternatives are used. Application of additional treatments during the growing season of fungicides, nematicides, insecticides, and herbicides to try to maintain production are not considered. Also, new alternatives and innovations may be developed in the future to replace fumigation with methyl bromide.

<sup>6</sup>The United States would switch from a net exporter of strawberries to a net importer.

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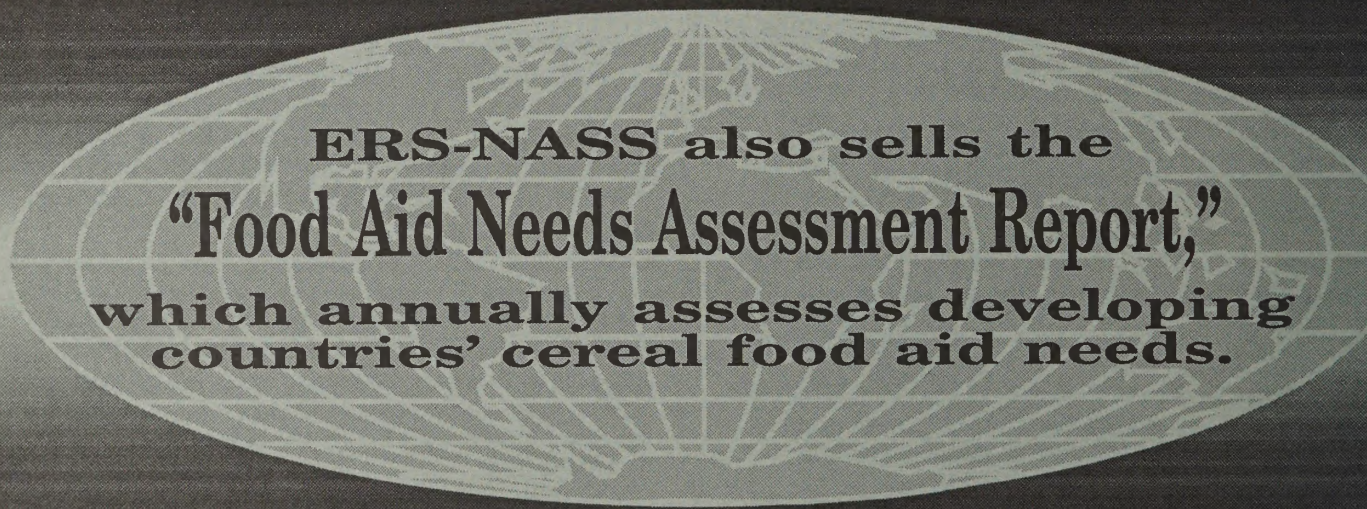
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